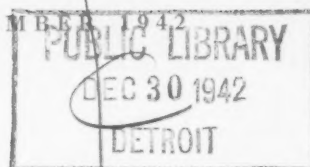


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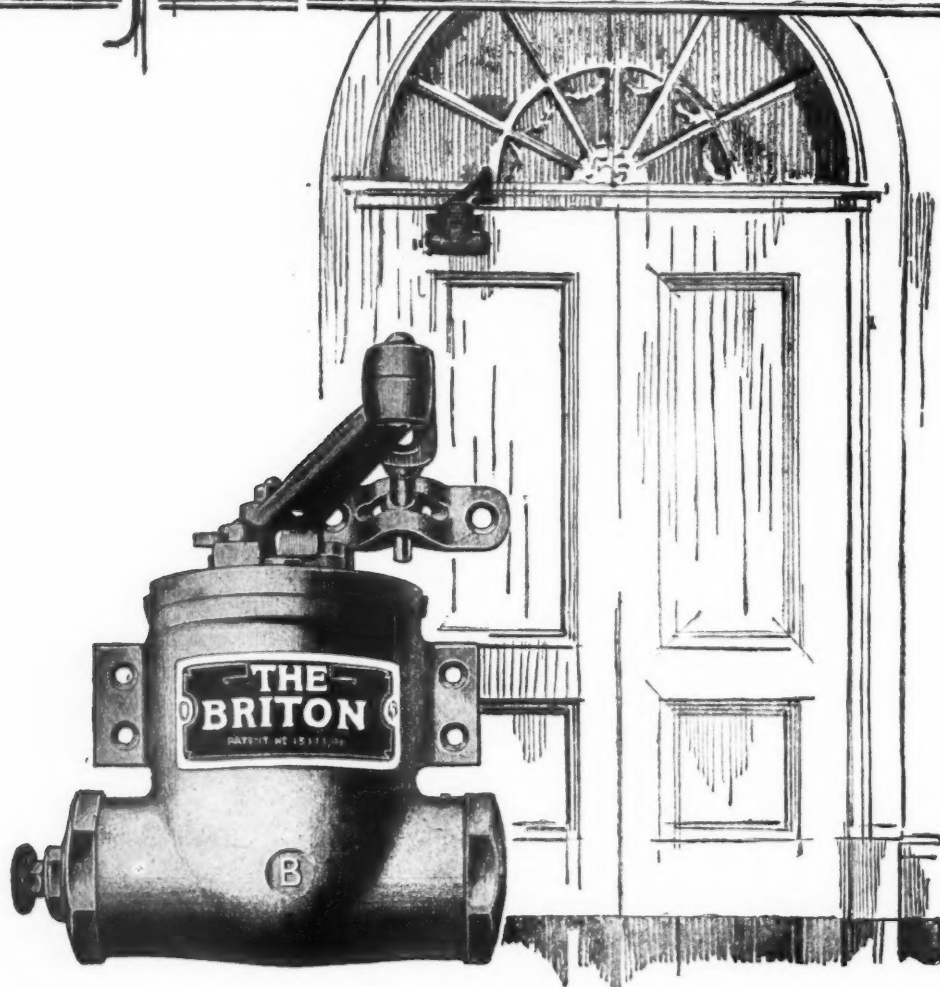


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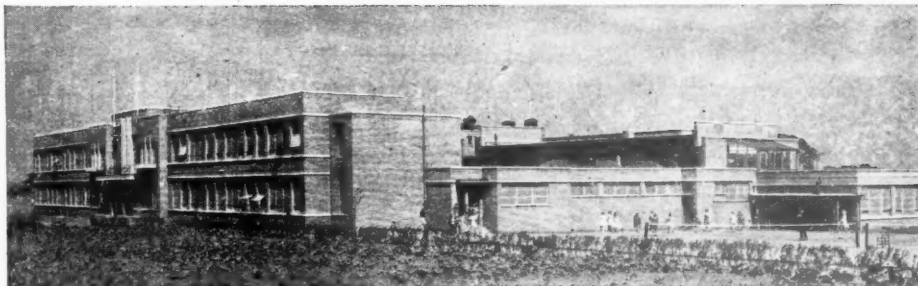


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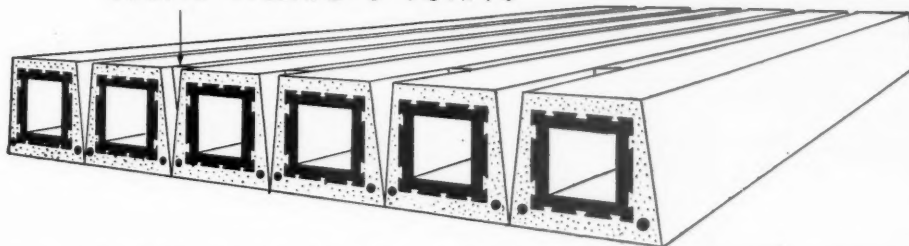
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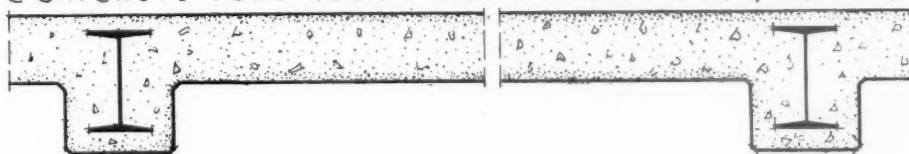
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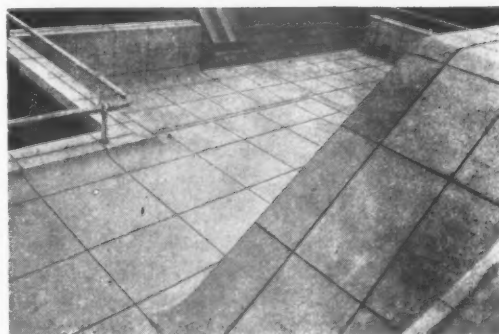


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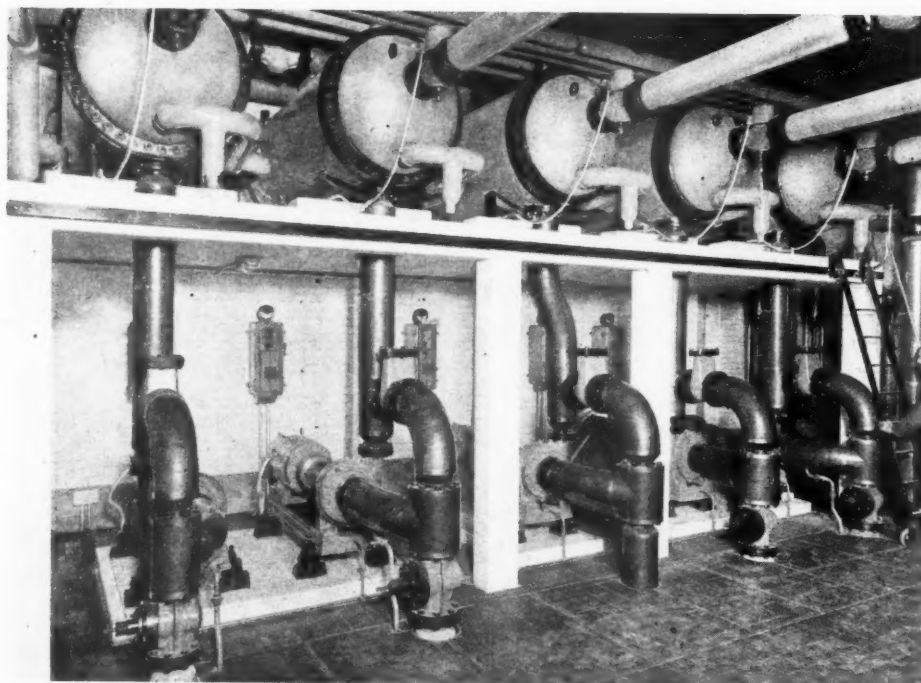
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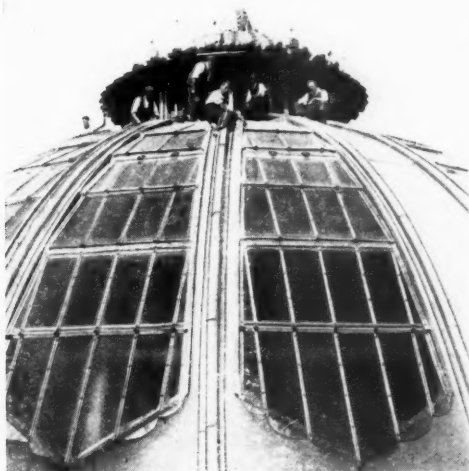
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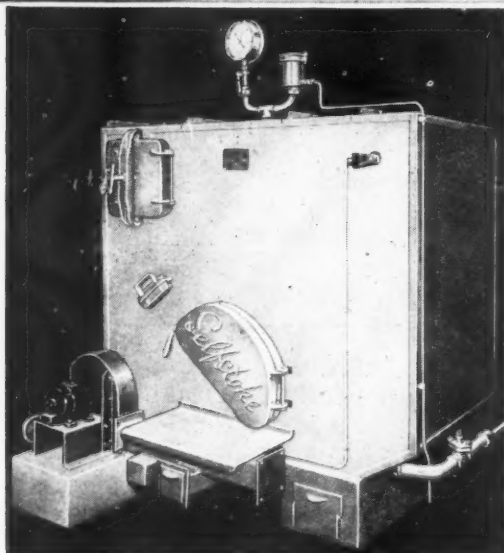
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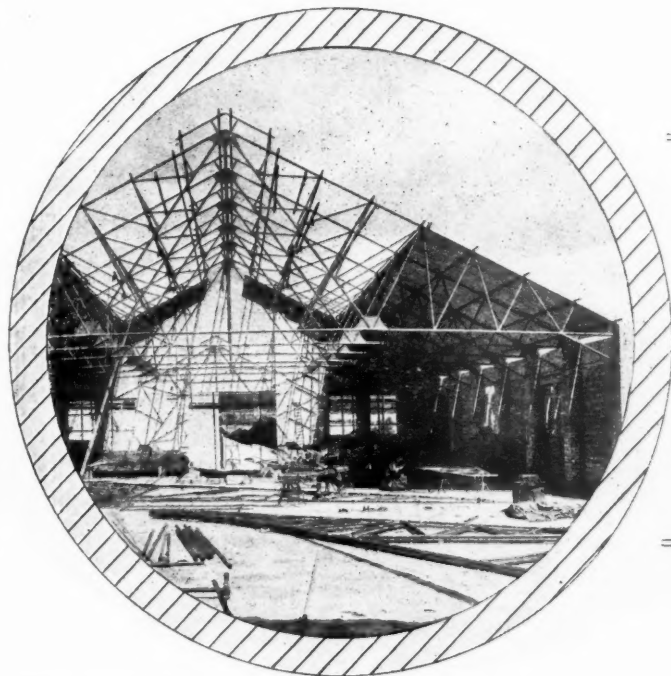
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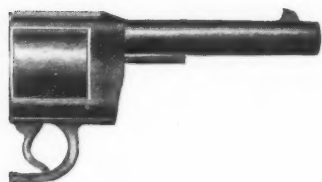
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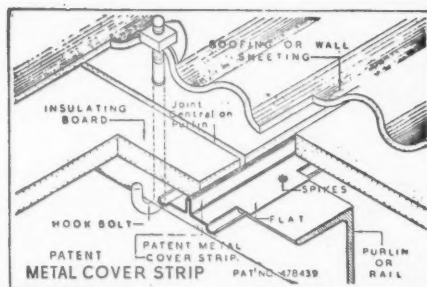
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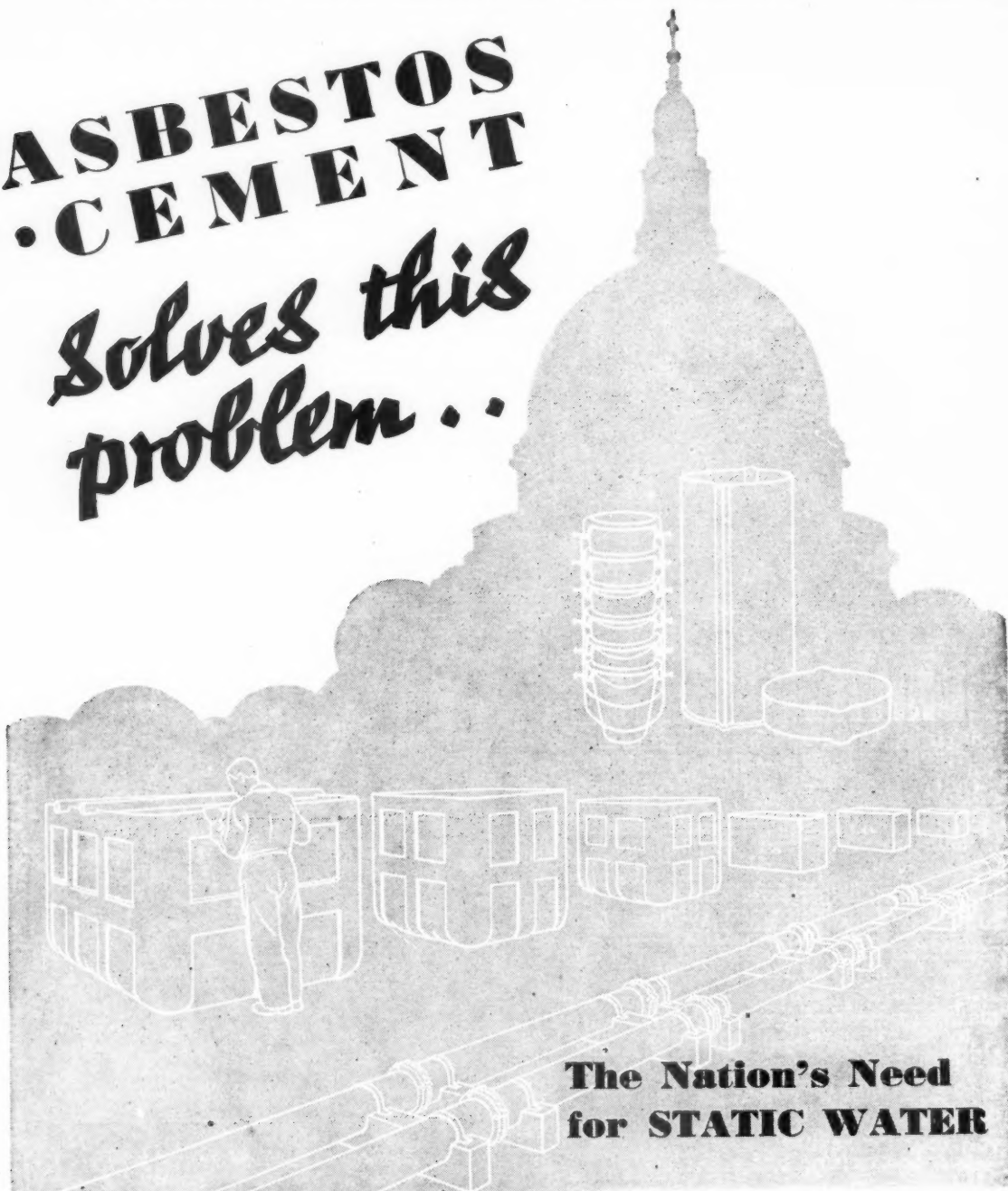
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# JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

Vol. 50 3rd Series] NOVEMBER 1942 [No. 1

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*A portrait of the President by Mr. W. Harold House.  
A new Session opens this month, the 3rd in Mr. Ansell's  
Presidency*



## Journal

### THE RECONSTRUCTION COMMITTEE'S GENERAL STATEMENT

#### A letter from Lord Justice Scott [Hon. A.] to the President

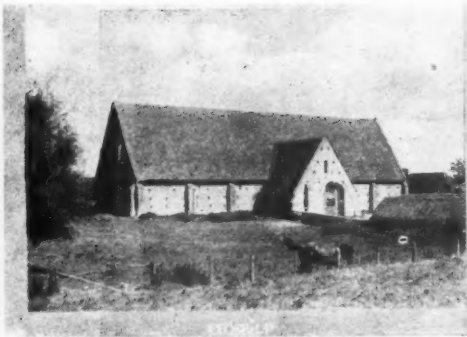
*The Red House,  
Sotwell, Wallingford.  
26.8.42.*

DEAR MR. ANSELL,—It was kind of you to send me with your letter of the 11th instant the "First General Statement of Conclusions." I have been so busy with the aftermath of my Committee's report that I could not write before: so please forgive the delay.

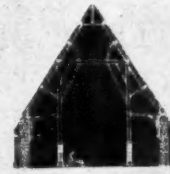
It is a very useful statement—partly because it takes far-reaching views and is not afraid of being called ambitious. I agree with a great deal of it—and with the *whole* of Sections I and IV, and most of II and III. You will have noticed, I expect, that much of my Committee's report is in line with yours—e.g. as to the essential need of architects, and as to an obligation on planning authorities to have highly qualified professional assistance.

The main point on which I at present differ is your machinery for *development* as distinct from *planning*. In our Ch. XI we keep the two separate, and do not give the Planning Minister or the Planning Commission control over Government Departments which have been entrusted by Parliament with "development" duties involving land utilisation; but *through the Committee of Ministers*, all of whom are "development ministers," except its chairman, the non-departmental minister of planning, we provide for effective *control* by the Cabinet over development in the highest stage. It will not, in our view, often be necessary to invoke that control, because questions in issue will have been thrashed out and solved, in most cases, in the lower stages, i.e. of the Commission. Development by local authorities will, where a question of national interest arises, be directly controlled and revised by the Commission, unless the issue is contested and consequently calls for consideration by the Cabinet Committee.

I am afraid of giving to the Central Authority in its *planning* capacity duties of development which may overlap the duties entrusted by Parliament to particular development ministries—what we call "departmental ministries." By roping the latter in at both levels—Commission and Cabinet Committee—



THE SKILL OF THE MEDIAEVAL CARPENTERS REVEALED BY THE GREAT ROOF



wherever a question arises of translating planning into development, we avoid trespassing on their own particular sphere and so hurting their *amour propre*; and we also avoid arousing their jealousies—which are the bane of any constitutional system of ministries and cause more bureaucracy and red tape than any other emotion of human nature in the breasts of civil servants.

The only other comment I think worth making is that care is needed to see that people don't misunderstand the expression "National Plan." Of course, map-making as an expression of the process of planning as it goes along is inevitably desirable and necessary, but the function of the central planning authority is continuous and never-ceasing. There is a good paragraph on that in the 1938 report of the Council of the T.P.I. (I was chairman of the Committee which produced that report). Continuous survey, continuous research, ever-changing up-to-date knowledge form the background of all progressive planning. I say this, not because I imagine the R.I.B.A. does not know it, but because the public are apt to think of a "national plan" as something like the plan attached to a local scheme under the 1932 Act, and to suppose that when once drawn up it is settled for ever. That static quality of schemes under the Act is one of its worst features. Your statement well brings out the progressive character of all good planning. To zone for residential purposes, and not thereafter to control the siting, layout and appearance of the residences is, as we all know now, futile.

I should be very grateful if you could have two more copies of your "First Statement" and of all the previous statements or reports on which it is founded (some of which I have) sent to me.

I have President Roosevelt's special envoy on Planning (the Hon. Ch. F. Palmer) coming here on Friday to spend the day in discussing planning, and I should like to let him see some of our R.I.B.A. stuff—"our" because I boast, like a Homeric hero, to be a member (though honorary and humble) of the R.I.B.A. I hope I do not bore you!

Yours sincerely,  
LESLIE SCOTT.

[NOTE.]

21.10.42.

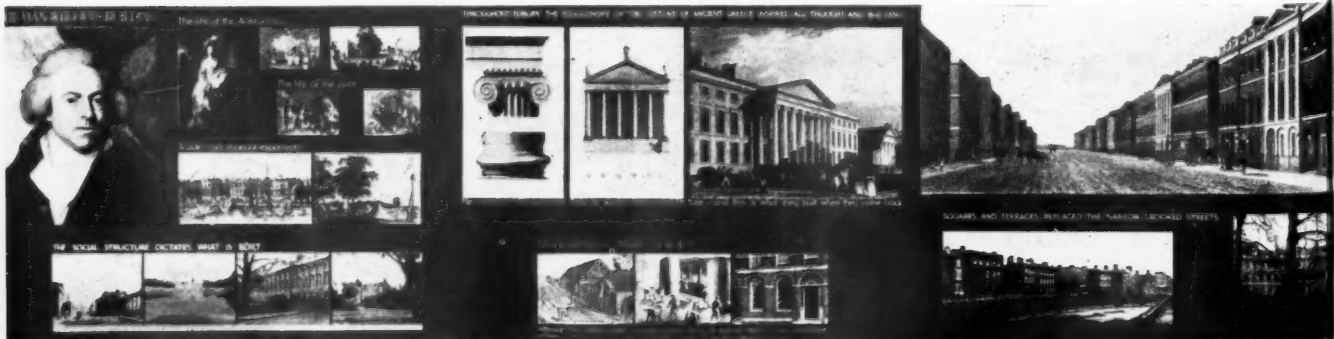
The Uthwatt Report had not been published when I wrote the above letter. It is therefore interesting that it, too, adopts the same machinery, with no differences except one of emphasis. He was essentially concerned with the problems presented by development, i.e., with the carrying out of planning. He, naturally enough, therefore thinks of the Chairman of the Committee of Ministers as the head of the development side of national policy, and therefore calls him "The Minister of National Development." He recognises that the Development Ministries must be independent: so do we. He recognises that the Cabinet must control them: so do we. But each Committee, approaching the constitutional problem from different angles, arrives at identical machinery, as the most consonant with our constitution and most convenient and effective in the twin tasks of thinking ahead and acting.

L. S.

The pictures at the head and foot of this page show two of the screens from the exhibition "The Englishman Builds," which has been on show at the National Gallery as a preliminary to exhibition throughout the country. "The Englishman Builds" was designed by Mr. Ralph Tubbs [A.], whose other exhibition for the Council for the Encouragement of Music and the Arts, "Living in Cities," has already been shown throughout Britain during the past eighteen months.

The present exhibition is not concerned with architectural "styles," nor is it concerned with an academic knowledge of architecture. It is concerned with architecture as an expression of men's lives and aspirations and as the result of their technical knowledge. It attempts to show that architecture and men's ways of living are inseparable, that one simply expresses the other, and that, therefore, good architecture does not merely happen, but is the result of some sureness of purpose, and of the confidence of the builders in their own way of living.

At the same time, the exhibition tries to make the visitor feel some of the pleasure of looking at buildings and to stimulate a critical eye. It is based on the belief that it is more valuable to be able to apprehend a building, both as a work of art and as the expression of people's lives, than to comprehend the academic significance of styles.



# SOME PRINCIPLES OF FOUNDATION BEHAVIOUR

*A Lecture read at the R.I.B.A. on 10 October 1942 by A. W. Skempton, M.Sc., A.M.Inst.C.E., of the Building Research Station\**

## Introduction

It is not necessary to emphasise the importance of foundations. With badly designed foundations there will be cracking of plaster, cracks in the structure itself, and, sooner or later, the expensive and awkward operation of underpinning may have to be carried out (1).

It will be my task to outline very briefly some of the more useful discoveries which have been made in the field of foundation engineering during the last few years. Let us say since about 1920, for it was about then that soil mechanics was started. Now I want to make it clear that I appreciate all the fine work which has been executed before this date. There have, nevertheless, been occasional failures; and the leading men in a profession develop an intuition which is their guide. But certain principles have been found which will help all of us to make a sound job of the foundations; and these principles are particularly useful on new sites, and with exceptional structures when precedent is lacking. It is, for example, probable that there will be a tendency in the future for buildings in cities to be higher and this will impose greater loads on the foundations.

## Soil Types

The chief foundation troubles arise when we encounter soils such as clays, silts or sands. The clays and silts can be treated as a group which has a low bearing capacity and which continue to settle for years after a building has been completed (see Fig. 1). The sands and gravels form another group. They are

more stable and do not continue settling after construction, but may cause difficulties in excavation, especially if they are water-bearing.

The danger here is that when excavating it becomes necessary to pump in order to keep the bottom dry, and this pumping may bring out some of the finer particles in the surrounding sand, leading to settlements of any adjacent buildings. An

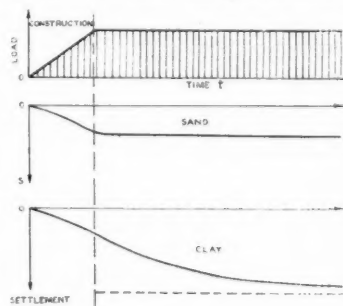


Fig. 1. Typical time-settlement curves.

elegant solution of this problem is provided in the process of groundwater lowering from filter wells (2). The question of sands may perhaps be summarised by saying that it is difficult to get the foundation in position, but when finished little further trouble may be expected. The case is entirely different with clays. Speaking generally, it may be said that the troubles start after the foundations have been completed; and for that reason most of my remarks will apply to clay.

## Footings on Clay

One of the commonest troubles with clays is their shrinkage and expansion in the summer and winter. These can cause considerable movements in the clay beneath shallow footings: the clay on one side of the building will either dry or swell more rapidly than on the other side, and relative movements in the walls will be the result. The movements are due to the removal or addition of water, and are seasonal; and they can be prevented by taking the footings to a depth which is not affected by seasonal changes to any important extent. Such a depth is roughly 3 ft. in England, and this is also sufficient to guard against frost action.

With houses on sloping sites in clay soils a second point must be considered. For it is an unfortunate fact that clay tends to creep downhill, and footings must, therefore, be deep enough to be below the zone of this movement. In the London area there are examples of houses cracking, due to this cause, even when their footings are 3 ft. or 4 ft. deep. A possible remedy is to place the building on reinforced concrete strip footings, supported at intervals by piles about 12 ft. long. These could be bored piles, the boring being made with a hand post-hole auger.

In the case of houses the above considerations may be all that is necessary. But for larger structures the bearing capacity of the clay must be taken into account. If the load on a footing is progressively increased, a point is reached at which the clay beneath the footing fails completely and the footing settles rapidly. The mechanism of failure is shown in Fig. 2, and it is important to notice that the clay is sheared to a depth roughly equal to the width of the footing.

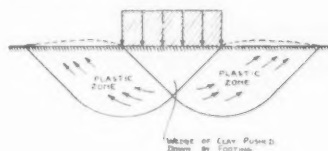


Fig. 2. Diagram illustrating mechanism of failure in shear beneath a footing.

It is known that the ultimate bearing capacity, i.e., the pressure causing a failure, is approximately equal to three times the compression strength of the clay (3). Thus, if the compression strength of a clay is found to be equal to 1 ton/sq. ft. the load which would cause a failure of this clay is about 3 tons/sq. ft. To find the bearing capacity we therefore take samples either from a boring or a trial pit to a depth below the footing equal to its width and measure their compression strength in much the same way as one would make a concrete cube test. This procedure is simple and can be carried out on the site (4). It has been checked by investigating the failure of a footing founded on a soft blue clay (Fig. 3). The compression strength of the clay was found to be one-third ton/sq. ft. and the calculated

\* Crown copyright reserved.

(1) I was interested to hear that the second paper in the JOURNAL of the R.I.B.A. more than 100 years ago was an Account of the methods used in Underpinning the long Storehouse at His Majesty's Dock Yard, Chatham, in the year 1834, by George L. Taylor [F.]. The first paper, on the Nature and Properties of Concrete by G. Godwin, Jr., was headed by the quotation from St. Matthew's Gospel, "and the rain descended and the floods came and the winds blew, and beat upon that house and it fell not for it was founded upon a rock."

(2) H. J. B. Harding and R. Glossop: *Recent Applications of the Ground Water Lowering Process*. *The Engineer*, April 1939.

(3) This has been discussed by A. W. Skempton: *An Investigation of the Bearing Capacity of a Soft Clay Soil*. *Journal Inst. C.E.*, June 1942.

(4) The technique is described by L. F. Cooling: *Soil Mechanics and Site Exploration*. *Journal Inst. C.E.*, March 1942.

bearing capacity was, therefore, 1 ton/sq. ft.—a value in close agreement with the load actually on the footing at the time of failure.

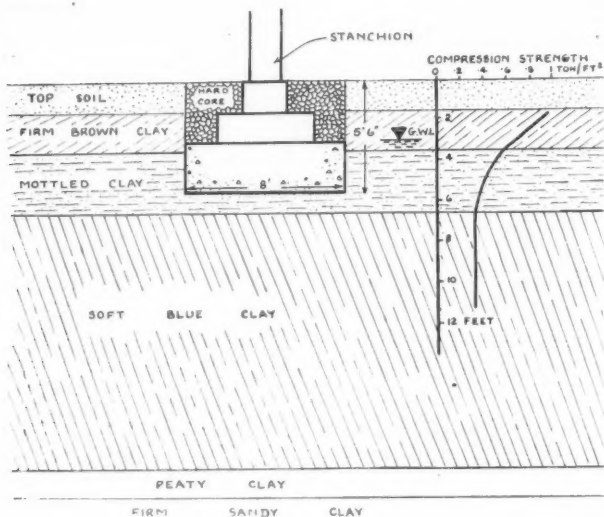


Fig. 3. Soil conditions at the site of a footing failure.

The depth of sampling deserves to be emphasised. In this example the clay became very appreciably stronger as the surface was approached, and had an estimate of the bearing capacity been made from an examination of the surface clay, with a possible assumption that the clay became stronger with depth, that estimate would have been sadly wrong.

So far we have been considering the ultimate bearing capacity of clay soils. The allowable capacity is, however, the value required for design. This allowable bearing capacity may be defined as the ultimate divided by a certain factor of safety. This is not a factor of ignorance but is a factor used to keep the loading well below the ultimate, and thus to keep the settlements within reasonable limits. The value of the factor depends to some extent on the type of building. In order to understand this point, consider a building founded on a series of isolated footings. The proportioning of the load on these could be done with great care, and yet the natural variations of the clay beneath the footings will, in general, cause the settlements to be unequal; and there are, therefore, relative movements between the various footings.

It is these relative settlements which can cause a great deal of trouble by cracking walls and plaster, and by over-straining a monolithic frame. They must be kept to a minimum and they must be taken into account, where necessary, in the design of the super-structure. Mr. Hauser will deal with this question, but I must refer to the factor of safety. Other things being equal, we can say that the less the settlement of the individual footings the less relative movement between them. To keep the

settlements small and, therefore, to keep the relative settlements small, an adequate factor of safety must be applied to the ultimate bearing capacity, and as a rough guide it may be said that a factor of 2 is suitable for most buildings, and a factor of 2.5 or 3 for buildings of types which are particularly sensitive to settlement (5). Thus, if the ultimate bearing capacity was found by

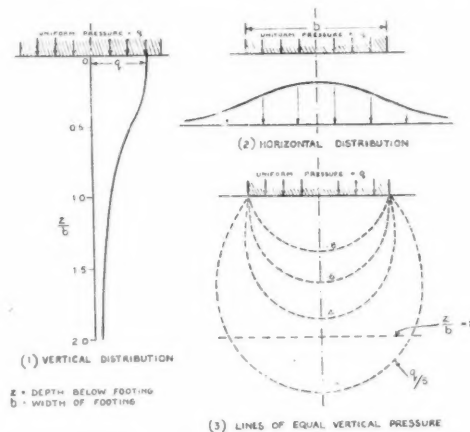


Fig. 4. Distribution of vertical pressure under a uniformly loaded square footing.

test to be 3 tons/sq. ft., the allowable should be between 1.5 and 1 ton/sq. ft. depending on the type of structure. More field observations are required on this very important question (6).

If the footings are moderately close, there is another factor which must be watched. The pressure from a footing is spread out in the soil and decreases with increasing depth (see Fig. 4). If there is a group of footings, the pressure at any depth—as, for example, on the clay layer in Fig. 5—will be the result of combining the pressures spread out from each of the footings. Thus, although the pressure from any one footing is quite small, the combined pressure is considerable, and the clay will consolidate. The process of consolidation is simply that of squeezing out of the clay some of its pore water (into the adjacent sand) and thereby causing a reduction in volume and a settlement. Here, again, the settlements will not in general be uniform over the whole area of the building and some relative settlement must be expected. It should also be realised that the consolidation is a slow process and will continue for some years after construction has been completed. The settlement can be estimated within certain limits of accuracy, but this is rather too technical for discussion here.

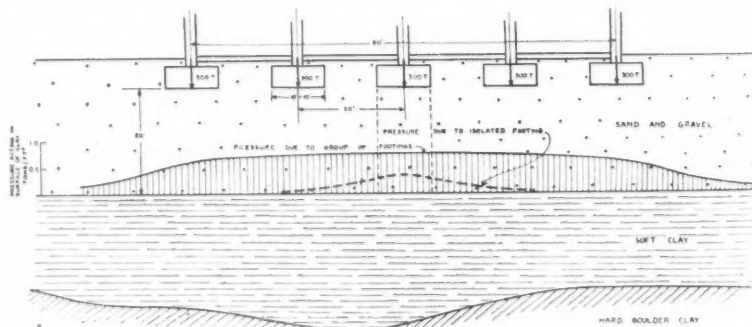


Fig. 5. Distribution of vertical pressure on a clay layer beneath the centre line of a building which is square in plan.

(5) Values given by K. Terzaghi in discussion of the paper by A. W. Skempton, *loc. cit.*

(6) K. Terzaghi: *The Actual Factor of Safety in Foundations*, *Structural Engineer*, March 1935, and *Settlement of Structures in Europe and Methods of Observations*. *Proc. Am. Soc. C.E.*, Sept. 1937.

The chief point to notice is that the clay layer in Fig. 5 is of concern in the foundation design, even although it lies at a good depth below the footings, and in spite of the sand having, for example, a high bearing capacity. This illustrates the importance of knowing the nature of the strata to a depth below a building at which the combined pressures have become negligible. It may be said that no rational foundation design is possible without knowing the nature of the soil to an adequate depth below the footings.

Another case where relative settlements may be of importance is that in which a new building is constructed immediately adjacent to an old one. A building which has been in position for many years may be assumed to have taken up its settlement; but the new building will inevitably settle, and if bonded into the old building the relative movement may cause cracking.

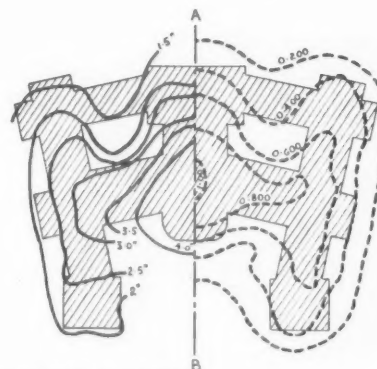
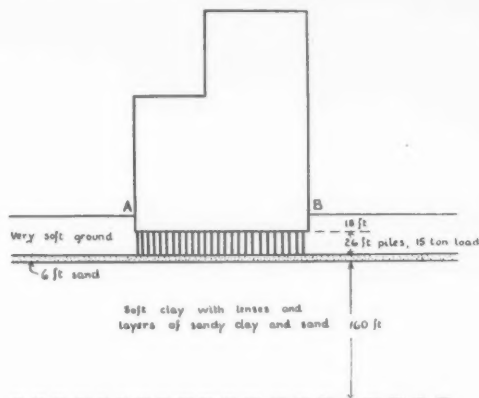
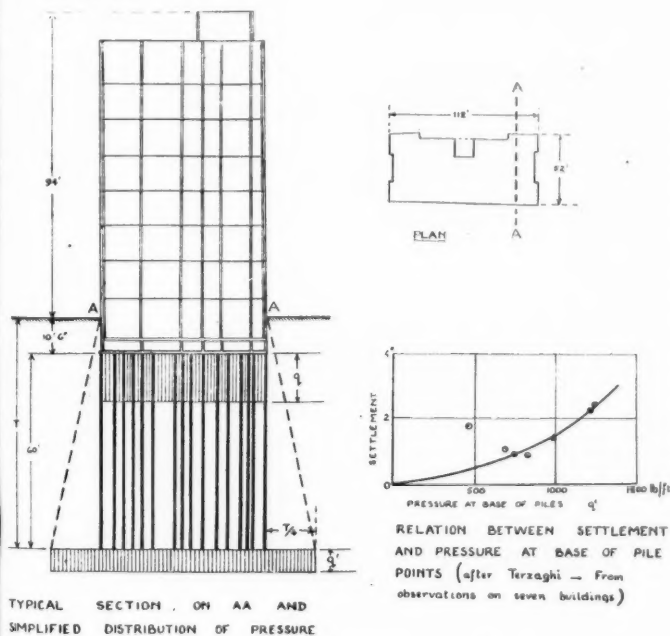
#### Bearing Pile Foundations

If the soil is not sufficiently good to permit isolated footings, it is usual to turn to a consideration of piled foundations. This is the classical solution which has been in use since at least Roman times, and if the piles can be driven through the poor soil into a firm stratum, the solution is perfectly satisfactory.

This constitutes a bearing pile foundation, and the piles act merely as columns carrying the structural load down to the firm stratum. But it is essential to prove the soundness of this stratum. An example of the neglect of this principle is provided by the Charity Hospital at New Orleans (7) (see Fig. 6). Here the piles were driven to refusal in a layer of sand; but the sand was only 6 ft. thick, which is negligible compared with the width of the building. So the building suffered heavy and continued settlements due to the consolidation of the underlying soft clay and remedial measures had to be adopted. The important point to realise here is that the load from one pile is quite small, but the load due to the group is large, and will influence the soil to a far greater depth than will that due to one pile.

#### Friction Pile Foundations

If there is no firm stratum at a reasonable depth, the bearing pile foundation becomes impracticable, and two alternatives remain. Firstly, the friction pile foundation, and, secondly, a concrete raft.



### Raft Foundations

A raft foundation spreads the load of a building over the whole plan area, and therefore reduces the foundation pressure to a minimum. The raft is particularly effective if combined with a deep excavation; for if  $x$  tons of soil are removed from an excavation, it is possible to add a building load of  $x$  tons to a raft placed over the bottom of the excavation without setting up any additional stresses in the soil. The building load can be increased beyond this value by an amount equal to the allowable bearing capacity of the soil.

Let us take as an example the blue London clay. This has an allowable bearing capacity of, say, 3 tons/sq. ft. and 18 ft. of it exerts a pressure of 1 ton/sq. ft. If, therefore, we excavate a hole 18 ft. deep, it is permissible to place a load of 4 tons/sq. ft. on a raft placed in the excavation. Since a building of the usual moderately heavy type weighs no more than 0.2 ton/sq. ft. per storey (11), it is seen that a 20-storey building could be built on the raft (provided that, of course, the raft is strong enough to withstand the stresses imposed on it). It is of interest to note that recent work on daylighting (12) indicates that this is a desirable height for buildings for population densities likely to occur in London. This height has, in fact, been exceeded in

the tower of the London University building, which is on a concrete raft about 30 ft. below ground level (13).

An important practical point arises in large excavations in clay, and it is that the clay should be covered with the concrete as soon as possible after being exposed. Clays can soften and expand very quickly when relieved of a previously existing pressure.

### Conclusions

The general conclusions may be summarised thus:—

1. In cases where precedent is lacking, intelligent foundation work can be carried out only with a knowledge of the soil to an appreciable depth below foundation level. This knowledge should include some quantitative data on the soil properties, such as the compression strength of a clay.

2. The cause of most troubles due to inadequate foundations is relative settlement. Every endeavour must be made to keep this to a minimum; and, where necessary, provision must be made in the superstructure to allow for some relative settlement.

I shall welcome any questions and criticisms of the paper, since the subject is a new one, and there is still a great deal to be learnt.

(10) K. Terzaghi in discussion of a paper by N. W. B. Clarke and J. B. Watson, in *Proc. Int. Conf. on Soil Mechanics*, Harvard University, June 1936, Vol. III.

(11) From data given by O. Faber, in *Building*, August 1932.

(12) Work carried out at the Building Research Station by W. Allen.

(13) C. Holden: *The University of London. JOURNAL R.I.B.A.*, May 1938.

## A POLISH ARCHITECTURAL SCHOOL AT LIVERPOOL

A scheme has come into operation in Liverpool whereby Polish architectural undergraduates who, with the German occupation, thought that their careers, if not ended, were held up for several years, are resuming their studies.

Following an agreement—sponsored by the British Council—between the Polish Government and the Liverpool School of Architecture, facilities have been provided for about sixty Polish students, who had already embarked on their professional studies in Poland, to complete their courses in Liverpool. When the war ends, therefore, Poland will possess a number of young and highly qualified architects immediately available to face the task of rebuilding their shattered country.

Both the staff and the students in Liverpool have warmly welcomed the prospects of close collaboration and friendship offered by the scheme, which was officially inaugurated on Friday, November 6, by General Sikorski, upon whom the Liverpool University conferred the honorary degree of Doctor of Laws.

The University of Liverpool undertakes as far as possible to provide the necessary educational facilities and the studio and other working accommodation required by the Polish students, the British Council defraying the tuition and examination fees, subscriptions to the Guild of Undergraduates, and cost of books, instruments and equipment required by the Polish school. All other expenses involved in the establishment and maintenance of the Polish school, including salaries of teachers and provision and maintenance of hostel accommodation, will be the responsibility of the Polish Government.

The purpose of the school is described as "to enable Polish students in exile to carry on their architectural studies so that

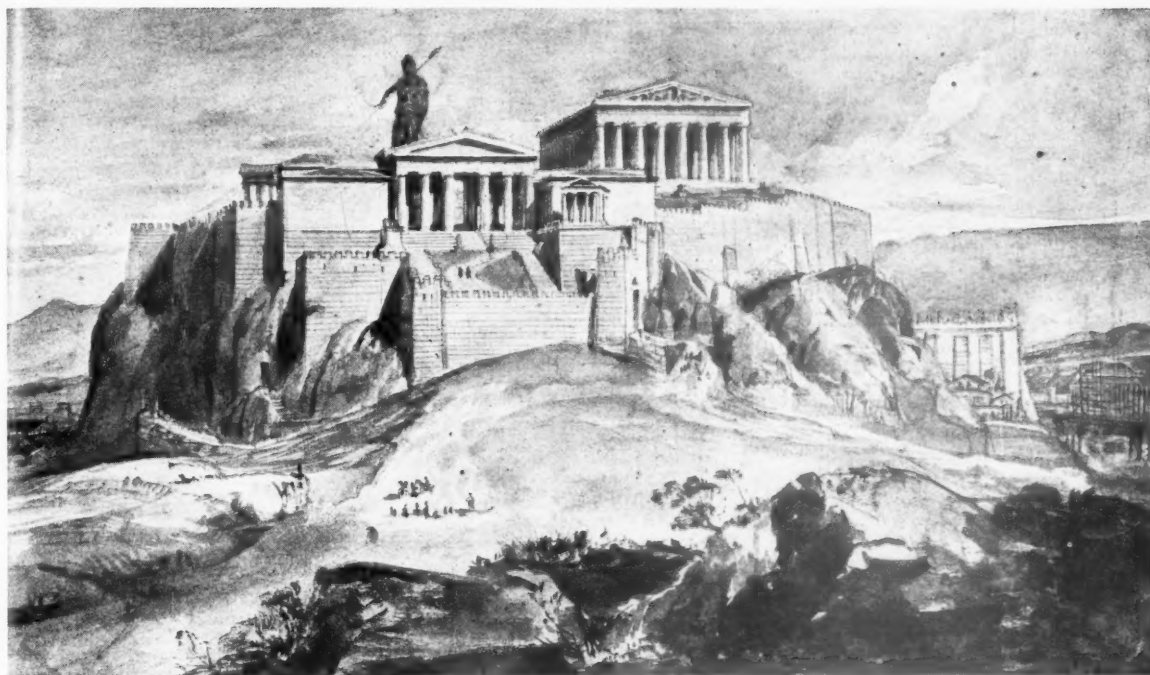
they may be adequately qualified to meet the needs of architectural practice in Poland, including urban, village and rural planning."

Regulations relating to the curriculum and examinations are subject to confirmation by the University of Liverpool and by the competent Polish authority. It is stipulated that the teaching body of the school shall be members of the staff of the Liverpool School of Architecture appointed by the University of Liverpool, and Polish lecturers appointed by the Polish Government on the nomination of the Board of Studies.

When the agreement was reached, General Sikorski, the Polish Prime Minister, expressed his high appreciation of, and deep gratitude for, the initiative of the University of Liverpool and of the British Council in seeking to help young Polish architects to complete their professional education. He described it as a special source of gratification to him that the students would always retain a strong feeling of friendship towards Great Britain and towards those helping them in their present difficulties.

Each of the students has been released from the Polish Army to attend the school.

Polish architectural authorities regard the scheme as a very important contribution to the work of rebuilding Poland, and they particularly appreciate the similarity of the Liverpool school's architectural course to that of Warsaw University Technical College, both providing their students with a feeling of form and composition, together with a high standard of practical constructional and engineering knowledge. The opportunity of becoming acquainted with British thought and experience in architecture is also welcomed.



## ARCHITECTURE AND ENGINEERING

W. H. ANSELL [President]

*A paper read by the President as one in a series of lectures organised by the Institution of Civil Engineers and given in the Engineering School of Cambridge University. The President of the Institution of Civil Engineers, Professor C. E. Inglis, was in the chair.*

There must have been a time in the early history of man when individuals were self-sufficient—they sang their own songs and built their own shelters. And there must also have been a time when specialists began to emerge from the mass level. Those whose voices left something to be desired no doubt preferred their singing to be done by others who showed more aptitude for that kind of thing, and in due course there would appear in the social structure bards who composed both the poem and the music, who also sang the song and played the accompaniment. The increase of specialisation in music brought separation of these useful accomplishments and we get the composer who writes, the conductor who interprets, the complex orchestra, and the singers, soloists and chorus, who produce the actual sounds that enthral or exasperate us as the case may be.

And so in building—some ingenious fellows who preferred building to hunting would, because of their greater skill, build for their neighbours, and the first architects or engineers or contractors, call them what you will as all the functions were combined in the one individual, made their appearance. The specialisation, consequent upon the increasing skill in one direction or another of individuals, and the ever-increasing complication of civilised life, resulted, as in music, in the separation of designers and executants, and all the complexity of modern architectural engineering and building practice.

In considering, therefore, the relationship of architecture and engineering, I would like for a moment or two to consider their points of likeness, indeed of unity. It almost looks as though I must here follow the Joadian formula and say that it all depends on what you mean by architecture and what you mean by engineering. I refuse to be beguiled into the giving of definitions,

but I would ask you to remember that architecture as an art stands or falls on its appeal to the emotions, but a building as a building stands or falls on the integrity of its constructional design, the quality of its materials and the skill of its craftsmen; engineering qualities, you may say.

One thing the two have in common is that neither is independent of a clearly defined human need for shelter and the convenient environment of a human activity, or for the provision of public necessities and utilities like water supplies and transport. Painters and poets, mentally unstable, etc. Law of gravity not subject to changes of fashion. Admirable sanity.

Some engineering has but little contact with an æsthetic appeal, but wherever any structure appears above ground in even the most unpromising engineering scheme, there is provided a greater or smaller opportunity for that something additional to functionalism that architecture demands, a satisfaction of the mind which follows the finely resolved solution of a building problem.

It is important to remember that almost all architectural "expression" form, other than surface decoration, had a structural origin, which is one reason why new shapes cannot be invented or created at will. Those who demand a new style in architecture and think it only needs a clever designer to sit down in a quiet place and out of his inner consciousness and imperfect memory to evolve something entirely new are woefully wrong. The effort, if made, and sometimes it is, unwisely, made, becomes at its best a matter of elimination only, which may be quite pleasing, but if more successful in producing something which has never been seen before, usually also produces the hope that it will never be seen again.

Constructionally, the great simple factors of buildings are but few. The wall is an enclosing and supporting member, the column or pier supports but does not enclose, the lintel and the arch are members which bridge openings in the wall, the ceiling, the vault and the dome are, as it were, extensions of the beam and the arch for the covering of space. If you add to these the cantilever you have all the great primal forms by means of which buildings have been raised and roofed, and made habitable by man for his use and enjoyment.

These forms are truly the heritage of the ages, and have been used by builders of every race and in every country. Investigate where you will the architecture of the world—you will find one or other of these forms as the dominant motive. But though all ages have used them, they have not used them in the same way—they have been the words by which each age has expressed itself and its own thought. The great buildings of the world are among the world's great thoughts. The influences which have gone to the making of the variations in the use of these forms include everything that man is and has, and we need not do more than mention a few of them. The degree of culture of a race affects the purposes for which it needs buildings, and therefore the opportunities it gives to its builders and the social condition of the workers influences their skill; the building materials available, with their capabilities and limitations, determine the construction and the form the construction shall take.

In every age and in every country up to the fifteenth or sixteenth centuries the response of building form to these controlling conditions has been instant and clear. Whatever the derivations of the forms each age has used them in its own way to express itself. Expression form, and by expression form I mean the shapes given to constructive factors, is not universal, nor cosmopolitan, sometimes it has been almost parochial. Up to the sixteenth century it was mainly true to its structural origin or reminiscent of a solution of a structural necessity that has passed away.

*Mr. Ansell here described in detail the structural influences controlling the design of the Byzantine capital and the Norman pier, continuing:—*

I mention these to show that architectural form was in great measure derived from engineering and structural necessities. May I now draw your attention to three ways by which builders in the past have tried to give aesthetic values to their buildings? I like to fortify my wise saws with definite instances, even though they may not always be modern. One way is by the shaping and refining of structural members themselves, another by adding decorative members to an exterior, and the third by the selected controlled disposition of engineering factors alone without either shaping or ornamenting.

*Mr. Ansell here analysed three buildings as examples of his three ways by which aesthetic values have been given to structure. As an example of the shaping and refining of structural members, he instanced the Parthenon, the Greek method; as example of the addition of decorative members to an exterior he described the Colosseum; and as example of the selected, controlled disposition of engineering factors alone he described the Pont du Gard.*

I could, he continued, add to these examples, but there is no need. They serve to show the three ways of obtaining aesthetic effect which I gave earlier in the lecture—the selective ordered disposition of sheer structural factors, the shaping and refining of those factors and the addition of surface expression form, but not all these ways are of equal value.

A year or two ago I read a paper on Architectural Education at the R.I.B.A., and as some of the points I made have a bearing on the relationship of architecture and engineering, I would like to refer to them here. Education in architecture has to concern itself with the imparting of facts as to materials, constructional principles and practices; the cultivation of a student's power of judgment by the study of buildings, old and new, and the development of his powers of planning and designing buildings and their surroundings. The student should be initiated into the science of planning, the technique of building and the power of building analysis. His ability to take a cold, clear scientific

view of functional purpose and construction should have been so developed that the new problems of his own age, when they come, find him perfectly capable of dealing with them.

Construction is one of the subjects which must quite definitely be taught. First the building technique of the traditional crafts, for even in a new and more scientific age, stone and brick, tile and slate will still be available; then the theoretical calculations and the use of the results of scientific tests of steel and reinforced concrete.

Some of the American architectural schools have a four-year course in architectural engineering for such students as have a natural leaning to the constructive side, and over there there are many firms of architects which have engineering specialists on their staffs. To be useful, they must have been trained as building engineers. There are many good engineers to-day who would be far better as co-operators with architects if their training had had this definite bias towards the building of buildings. It cannot be too clearly realised that in the complex buildings of to-day, there are few services that can proceed without modification owing to the equally important demands of other services. The architect of to-day has to be the co-ordinator of apparently antagonistic and incompatible requirements, the mere thought of which is enough to make Ictinus and Callicrates rejoice in their graves that their own problems were so much simpler.

I have dealt with points in the training of an architect, but I would suggest that an engineer who wishes to specialise in the building of buildings might do worse than share the early training of the architect, and I am sure it would do many architects good if they shared the early training of the engineer. This common ground, however, must not be too extensive or it will grow too large a crop of Jacks of both trades and masters of neither. Life is too short for the average man, in which classification most of us in honesty must place ourselves, to become both a first-class engineer and a first-class architect, and he had better decide which he is best fitted to be and concentrate on achieving that end.

But for the structural engineer and the architect there are many points of contact and of blending, and they should get together, realise each other's point of view, and work so that whatever has to be done shall be done by those whose training and skill make them most capable of doing it most successfully.

May I look back on the course we have followed in this lecture? Dean Stubbs used to tell his students that a lecturer should say everything three times in order properly to fix it in the minds of his audience. He should first tell them what he proposed to say, he should then say it, and finally he should tell them what he has said. I have often noticed in the courts how closely certain leading counsel follow this advice. Apparently they know their juries or perhaps their judges.

I tried first to point out that although modern users of them do not always realise it, architectural "expression" forms had structural origins, that in past years the aesthetically satisfying shapes of capitals and piers came naturally from the needs of the particular construction that had been chosen, and the material available to carry it out.

I then, by an analysis of three well-known buildings, showed the various ways by which their acknowledged aesthetic value had been given them. Now there are those in the architectural profession who say that it is both unnecessary and undesirable that architects should study the buildings of past ages, just as, to judge from some of the daily papers, there are those who consider it unnecessary for a journalist to have any acquaintance with literature, or the history and construction of the English language. The study of the past which I recommend is not archaeological, nor is it to provide a store of motifs to be imitated as in the days when a holiday in Bruges decided the manner of façade for a London square, or a visit to Spain resulted in towers resembling Seville appearing in South Kensington. Modern building will use classic or Renaissance form but rarely. It will not depend for its beauty on these alone, but the man who omits

*St. Pancras*

them because he knows nothing about them will omit much more. His work will almost certainly lack the breadth and simplicity and the serenity of classic building. No one can so triumphantly omit the orders as the man who knows all about them. The influence of his study will be seen in the ordered efficiency of his plan, the breadth of his mass forms, the sense of scale and proportion, even though there be but little reproduction of classic details or ornament in it. It is not for nothing that some of the most advanced modernist designers were in their time scholars of the British School at Rome for two years. They wear their modernism with a difference.

But the designing of façades is not the main business of an engineer or an architect. I mentioned that neither architecture nor engineering is independent of human needs. To quote Dean Hudnut, now the head of the Harvard Architectural School: "Whatever beauty he, the architect, may achieve will be a beauty wholly in accord with those intellectual satisfactions which arise from the command of technique, and from a consciousness of social usefulness." The same thing applies to engineering in almost all its many variations. Social usefulness is at the very root of the matter, and that is why good planning must be the basis of design in either sphere. The achievement of beauty is largely dependent upon it. There is a beauty in simple orderliness which is very satisfying. Everyone who, from the windows of a railway carriage, looks out on an old industrial area, is familiar with the hugger-mugger untidiness of many works and factories. The waste of time and energy in them must be enormous, but how can beauty be achieved, say, in a chemical works? Not, I assure you, in pretending it is something else, or in putting insincere trappings upon it, but by ensuring the complete functioning appropriateness of its layout and its buildings.

You may have seen a Government building in London of considerable size and rather uncouth proportions not a hundred miles from Charing Cross, a behemoth of a building, rising in a quite pleasant and important site. Its engineer designers have no doubt provided everything in the way of accommodation which their clients demanded—I cannot say, not having been

inside, but they would appear to have exercised no control over its exterior mass shape. Whatever their plan it has been allowed to govern the external proportion, and it does not seem to have occurred to them that planning is three-dimensional, that a plan can be devised with its elevational possibilities born in mind, and that there are more ways than one of providing accommodation.

This, I fear, has come about owing to the difference in much engineer training and the usual architectural training. However, when the building was up, they appear to have been struck with horror at the dreadful and afflicting sight, and to have called in an architect to tickle up the exterior with textures and concrete enrichments. This he has done quite cleverly, with the result that one laments the more the ignorance and wrong-headedness which rejected a glorious opportunity for the earlier co-operation of the engineer and the architect. Of all the ways of giving æsthetic value, the mere adding of "texture" interest is one of the feeblest where the original design is faulty—valuable

*King's Cross*

though texture is in its right place. Even the position of this building has been cleverly chosen to damage one of the best views in London.

Another foolish method of endeavouring to add architectural interest to an engineering necessity is to take a form which is of agreed artistic value, transplant it, and use it for quite other purposes. I am thinking of a factory or works chimney not far from Sheffield which is a replica of an Italian campanile—I believe Giotto's. The Yorkshire business men knew that this was world-famous—extolled by Mr. Ruskin, whose museum in Sheffield they all knew. What could they do better for their chimney than copy so fair an example? It was done, and now, as you go by in the train, you see this begrimed erection puffing great clouds of black smoke to the sooty surprise of its own architectural adornments.

A good example of a satisfying co-operation of architect and engineer is provided by the electric and other stations of the Underground railways and the London Transport Board. The arrival of railways in this country rather caught the architects napping. Here was a new method of transport, a fine engineering achievement which required buildings of some importance. Would you not have thought that the new requirements of railway travel would have suggested a simpler, more elemental approach to building design—an obtaining of æsthetic effect and value by the ordered arrangement of the constructive factors I have named? In comparatively few instances was this done. The Classic and Gothic controversy was boiling up, and some station designers leaned to one side and some to the other. On the whole, the Classic men produced the finer and more suitable buildings—there is, after all, something about the Classic column that belongs to all ages. It has become an essential part of the language of architecture, and is understood by all men. In consequence, though you may consider its use for a nineteenth-century railway station something of an anachronism, some very dignified buildings were produced with its aid, like the Dublin stations with their grey granite Doric columns. The Gothic shirt front to St. Pancras was not so fortunate, and could hardly have been less expressive of the activities to which it provided an entrance. Late thirteenth-century Gothic with a dash of French influence is not the ideal clothing for an English railway station. King's Cross, which, I fear, was looked upon at the time as the poor relation of its wealthy and fashionable neighbour next door, was, in fact, a far truer translation of engineering science into æsthetic values. Its two great arches brought its façade into a real relationship to the main spans within, just as the low sloping roof and level ridge of the Greek Temple provided the shape of the pedimental ends.

We should have liked King's Cross better if it had three arches instead of two, when it would have dared comparison in its true simple use of the round arch with even the Basilica of Constantine, and we should like it better even now if the clutter of little mean buildings that encumber it up to the Euston Road frontage were cleared away, and a tidying-up of the space in front carried out, so as to provide a dignified station approach. King's Cross deserves better treatment than it has received. In justice to the engineers of St. Pancras, it must be said that the mighty iron arch of the interior is one of the finest things in London, and if it had been allowed to dominate the whole front, a much higher æsthetic ideal would have been reached.

The idea that the railway hotel must be placed at the entrance to the station put a most serious handicap on the unfortunate designer in the matter of scale, as it involved the adoption of a domestic scale for much of the façade, instead of the larger simpler scale suggested by the engineering factors.

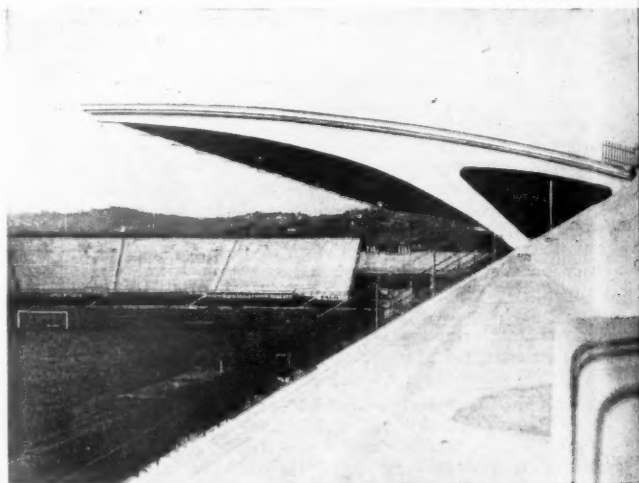
When the Twopenny Tube, which is now the Central London, was built, its stations of red or buff terracotta were little differentiated from the more commonplace office buildings of the London street, but with Mr. Frank Pick as director, the extension of tubes and suburban lines took a new external expression.

Stations were no longer designed to look like Greek temples or French châteaux, or even like nice, respectable English country houses or cottages; curiously enough, they looked like everyone's ideal of an electric railway station. There was complete functional appropriateness in the plans, which varied with the sites and the types of station. The old labyrinthine passages of the early tubes were replaced by a logical direct planning of escalators, passages and platforms, passenger streams in and out, positions of ticket offices and machines were all taken into account in the plan, and though there is still much to be done in some of the older stations to get rid of the inconvenient complexity, due to the original lack of logical planning, London's electric railway stations are an outstanding example of what can be achieved by the intelligent and sympathetic co-operation of architect and engineer.

The exterior mass form of these stations, particularly in the more open sites, is a true extension of the plan into the third dimension—square and curved mass shapes are used not for their own sake but because they best express the plan. The effect is generally one of reticence and simplicity with absolute sincerity, and an absence of make-believe. There is a uniformity of motive in them all, but no monotony. Their uniformity is not that of the multiple shop, which reproduces as nearly as possible an exact design in every suburban street or country town. There is little ornamental detail or even architectural moulding, but such as there is is infused with scholarship and right feeling. This has been carried into the design of interior fittings like lamp standards, escalator casings, advertisement frames and every visible factor, and the interest of the result makes us long for the day when such efficient engineering and such architectural skill shall be seen in all such buildings.

These, however, are the necessary ancillary buildings to a great engineering enterprise, but there are other engineering achievements which in themselves, apart from any building design, can be given great æsthetic value. River or lake dams, bridges and the engineering of great roads in mountainous country, grandstands of reinforced concrete with mighty cantilevered shelter hoods, and many other works all have imaginative and æsthetic possibilities which ought not to be ignored.

But you must not expect that you can add these values by tips from textbooks. In many instances, the engineering provides its own values, usually by the breadth and grandeur of its structural necessities, and all you have to do is to see that you do not lessen these by insincere additions of what you erroneously think make for beauty, and when I say "you," believe me, I mean myself also, and every designer of any physical environment.



Berta Stadium, Florence

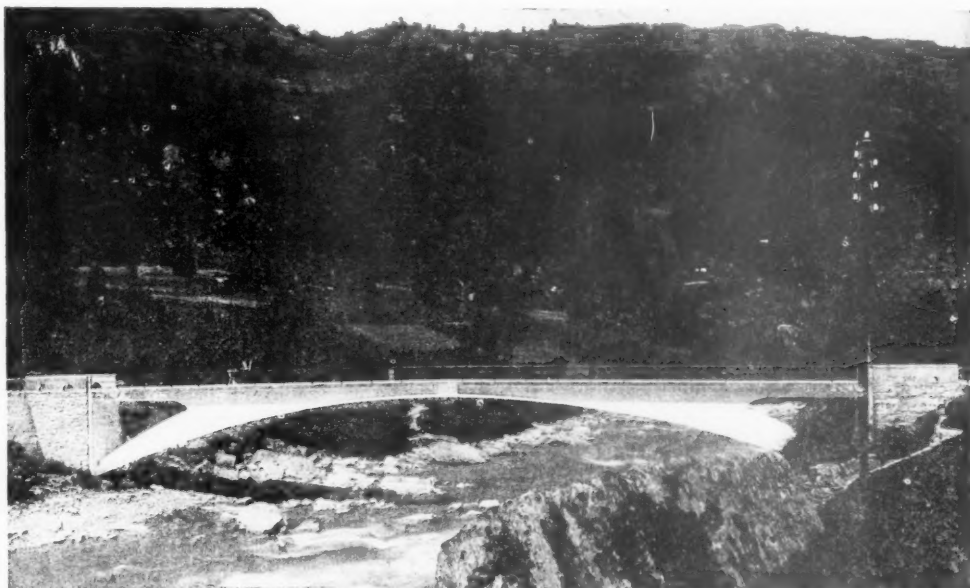
After the war, the demands of society on the architect and the engineer will be enormous, and their contribution will be the more valuable as they realise how much finer results can be obtained by co-operation than by separation. So far as buildings are concerned, I am afraid I cannot suggest any other captain for the team than the architect, whose plan and conception it is, and for a large proportion of buildings there is little need for an engineer, as the architect's training in construction is adequate for the purpose, just as there are many engineering projects where there is but small need for the architect, but where it is obviously desirable that there shall be consultation between them, it should begin early. As soon as the appropriate environment for the particular human activity has been imagined and visualised, the appropriate construction best fitted to create the building should be considered with the engineer from the period of sketch plans onward, and where an engineering problem would benefit from the planning and æsthetic ability of the architect, he too should be brought in early—not, as in the instance I have given, to make the best of a bad æsthetic job, nor, may I say, to hide what might have been a magnificent piece of engineering, if allowed to be seen, by encasing it with the sham Gothic towers and unnecessary masonry of the Tower Bridge.

Before there can be the planning of buildings, there must be the planning of the land which provides the sites and arranges the lines of the roads, and here is a fruitful ground for co-operation. I do not suggest that either the engineer or architect should regard himself as being the superhuman who tells the public what it ought to want and what it can have. We all, as citizens of a democratic State, should have a say in deciding on the kind of life we wish to live, and the kind of environment in which we wish to live it, but in the physical planning of that environment, the trained men should be given their chance, and the untrained

men should be forbidden to interfere. The days when beauty could be achieved without being consciously striven for have, I fear, gone by, and the necessity for beauty is therefore more urgent, and as one important step in its creation is the prevention of ugliness, a considerable measure of control will be required.

The future, I fear, will be difficult and life for most of us will not be sporting with Amaryllis in the shade, or bowed under the weight of gigantic haversacks striding with her over moor and fell. It will not either be a matter of fielding on the boundary in slumbrous afternoons, while the scent of the lime blossom drifts across the green and "the run-stealers flicker too and fro." There is no need to scorn these delights, they must have their place in a liberal education, but we must first live the laborious days.

For many hours in each day and most days in each week, for a large and quite disproportionate number of weeks in each year, most of us must work. The world will be saved by work, and planning will fail unless it secures that that work shall be carried on in conditions of convenience, of health, and of beauty. In the face of all the horrors that encompass us at the moment, we may well ask, "Do these things matter?" Can anything more be demanded of us than to keep ourselves alive while killing the other man and, if necessary, not even to concern ourselves over-much with keeping ourselves alive? Deep down in the heart of the particular tribe that has produced you and me, and indeed in most of the human family, is an unquenchable desire to do whatever job has to be done as well as it can be done. The resolve to make things not only work well but look well, to minister to the spirit as well as to the body, is a proof, even in the face of the laughter of whatever gods there be, that we are, and will remain, unconquerable in spirit, and that we still regard beauty as the necessary concomitant of utility.



*Tavanasa Bridge, Switzerland, by Robert Maillart*

## THE ARCHITECTURAL SCIENCE BOARD LECTURES

The second group of A.S.B. lectures were held on Saturday, 17 October, when the large attendance of the previous Saturday was repeated—well over 100 architects and members of associated professions turned up and sat through the full session until about 6.30.

The President, who unfortunately had been prevented by illness from coming to the first Saturday's meetings, was able to inaugurate this session and to introduce Mr. George Hicks, M.P., Parliamentary Secretary to M.O.W.P. Mr. Hicks, in taking the chair,

thanked the President for what he had just said and congratulated the R.I.B.A. on taking scientific research into industry. He was sure that there was a very large and profitable field to be covered, and any who felt inclined to help in that work would be amply repaid for their studies. The industry also would be enriched.

It was not his business as chairman to deal with the subject under discussion, but to offer a few introductory remarks and perhaps to throw into the arena a couple of questions which needed answering. He was the more pleased to take the chair because he was thus able to identify himself personally as well as officially with the enquiry into the influence of recent scientific research on the design of building structures, an enquiry which had been sponsored by the R.I.B.A. Architectural Science Board and the Building Research Station.

Many of those present would know the lecturer of the afternoon, Mr. Andrews, personally as well as professionally. He was famous not only as a practising structural engineer but as a teacher. On the difficult subject of structural mechanics, stresses and strains, the "theory of structures," as it was curiously called, he was adept at making double-dutch appear as if it were commonplace English. In his lectures he could not only make engineering students understand what it was all about, but he could even do the same for architectural students; and he could not pay him a higher compliment!

There were two questions he wished to pose, and as chairman he was not allowed to give the answers, even if he knew them. The first was based upon the assumption that there were technical advantages in the greater employment of framed and reinforced concrete structures because they made for speed in erection, dimensional precision, greater structural stability, and, in most cases, greater fire resistance. Upon these assumptions, what could be done to make the employment of such structural methods economically practicable for a much larger class of buildings than hitherto?

Before the war nearly all buildings below six storeys in height were built on load-bearing walls. On very expensive sites the extra cost of framing might be offset by greater internal space on the lower floors. But there were two considerations which appertained to the greater employment of framed structures. The first was that with the growth of standardisation there might be greater need for the most exact precision in internal dimensions. Building was still sadly lacking in dimensional precision. The other was that the greater employment of framed structures would more fundamentally change the attitude to external walling. Those concerned would be forced to regard it more clearly as an insulating skin, and this would have the most profound effects on building design and economics.

His second main question was a general one, and one that had no doubt exercised the minds of those present at the various meetings of the conference. How was it possible to instil into the minds of everyone concerned the knowledge which had been accumulated by building research, or, to be more exact, how could it be ensured that all the relevant knowledge and research found its way quickly into actual building practice? Knowledge for the sake of knowledge might be of interest to the scientist, but in the building industry they were concerned with concrete facts. Knowledge and research were merely means to an end, the end being the actual building as it stood in the street. In the last analysis the instrument of research was not the man in the laboratory, but the workman on the job. Therefore research should be judged not only by its scientific publications, but by its visible manifestations in actual building.

There should be a complete infiltration of knowledge from the expert through the architect and builder down to the foreman and the workman engaged on the actual construction. And this

did not merely work in one way, for, at the same time, the knowledge and experience gained on the actual job should always be passing up to building research. This chain in knowledge was as strong as its weakest link, and there must be no weak links or gaps. There was at the moment a gap between research and practice. It might be that research had tended to become too academic and building practice too empirical. Perhaps there were faults on both sides, but the simple fact must be remembered that in architectural or building practice the man who was carrying out the largest amount of work was often the very man who had the least time for reading.

He had only just thrown out these one or two questions, which might be discussed on some other occasion, because Mr. Andrews would no doubt lead their minds in other directions no less profitable than the ones he had indicated. The influence of recent scientific research on the design of building structures, which was Mr. Andrews' subject, was of the greatest importance, and he had the utmost pleasure in taking the chair that day and in asking Mr. Andrews to give his lecture.

The two lectures on 17 October were by Mr. Ewart S. Andrews, an engineer, and Mr. C. S. White [A.] on the effect of recent scientific research on the design of building structures. These general surveys conclude the first round of a long-drawn-out endeavour. It is probable that the next group of lectures will deal with more detailed subjects, and will largely consist of direct reports by the scientists who have been conducting research on the architectural implications of their work.

Owing to the limitations on JOURNAL space it is possible to publish a selection only of the lectures. In this number we have Mr. Skempton's paper on Soil Mechanics. The verbatim reports of the other lectures and discussions are filed in the Library, where they can be seen by members.

### COMMITTEE ON THE DESIGN OF FARM BUILDINGS

A Committee under the Chairmanship of Mr. T. W. Haward has been set up by the Minister of Agriculture and Fisheries to consider and make recommendations regarding the lay-out, design and construction of farm buildings after the war.

All communications should be addressed to the Secretaries, Farm Buildings Committee, Ministry of Agriculture and Fisheries, 55 Whitehall, S.W.1.

The following is the personnel of the Committee:—

- Mr. T. W. Haward (Chairman), Past-President of the Land Agents' Society; agent to the Duke of Northumberland.
- Professor L. P. Abercrombie, M.A. [F.], Architect and Professor of Town Planning, University College, London, since 1935.
- Mr. William Alexander, farmer in Kent.
- Mr. Stanley Chivers, J.P., farmer in Cambridgeshire, director of Chivers, Ltd.
- Major A. Douglas, M.R.C.V.S., D.V.S.M., Deputy Chief Veterinary Officer, Ministry of Agriculture.
- Professor F. L. Engledow, C.M.G., M.A., B.Sc., Draper's Professor of Agriculture, Cambridge.
- Mr. George Gee, building contractor; farmer in Buckinghamshire and member of the Bucks W.A.E.C.
- Mr. Edwin Gunn [A.], former Superintending Architect to the Ministry of Agriculture.
- Mr. Edward Holland-Martin, director of the Bank of England; land owner in Worcestershire.
- Mr. W. Holmes, C.B.E., general secretary of the National Union of Agricultural Workers.
- Mr. R. W. Trumper, partner in the firm of Messrs. Clutton; agents for the Ecclesiastical Commissioners.
- Mr. James Turner, B.Sc., Nottinghamshire farmer; member of the Council of the National Farmers' Union.

## MEMBERS SERVING WITH THE FORCES

## TWENTY-NINTH LIST

## KILLED

BOUSTEAD, C. J. E. [S.], Flying Officer, R.A.F.  
 JONES, J. R. [A.], 2nd Lieut. R.E.  
 GOOLDEN, HARRY [A.]. Mr. Harry Goolden's name appeared in the list published in the last JOURNAL with the rank of Sgt. Pilot. We have since learnt that at the time of his death he was a Flight Lieutenant.

## MISSING

SCARD, H. E. A. [A.], Pilot Officer, R.A.F. V.R.

## UNITS AND RANKS OF SERVING MEMBERS

ALEXANDER, W. E. [A.], F/Lieut. R.A.F.  
 ANSELL, E. L. [A.], Major R.E.  
 BELFORD, J. M. [A.], L/Bdr. R.A.  
 BENINGTON, P. H. [A.], Capt. R.A.O.C.  
 BOND, L. H. [L.], Officer Cadet R.E.  
 BOOTHROYD, E. [A.], 2nd Lieut. R.E.  
 BOURNE, J. H. [A.], Squadron Leader R.A.F.V.R.  
 BOXALL, R. A. [S.], Sgt. R.A.  
 BROMILOW, F. E. [A.], 2nd Lieut. R.E.  
 BRUCE, G. R. [A.], 2nd Lieut. R.E.  
 CAROE, A. D. R. [F.], Squadron Leader R.A.F.V.R.  
 CARPENTER, L. J. [A.], Major R.E.  
 CASSIDY, W. J. [L.], L.A.C. R.A.F.  
 CAUSON, A. H. [A.], Capt. R.E.  
 COOK, E. JERDEN [A.], 2nd Lieut. R.E.  
 DAVIEL, R. F. [S.], Lieut. 10th Royal Hussars.  
 DEMBITZER, M. [A.], Cpl. Duke of Edinburgh's Own Rifles.  
 DICKSON, J. C. [S.], 2nd Lieut. S.A.C.D.C. Armoured Car Commands.  
 DOD, K. L. [S.], Capt. R.A.S.C.  
 DRIVER-JOWITT, E. E. A. [A.], L/Cpl. Southern Rhodesia Signal Coy.  
 ECCLESTONE, J. H. [A.], 2nd Lieut. R.E.  
 ELDER, ALBERT J. [A.], 2nd Lieut. R.E.  
 FAIRBAIRN, R. R., M.C. [A.], Major R.E.  
 FENNELL, T. E. [A.], 2nd Lieut. R.E.

FLOYD, J. P. [A.], Cpl. R.E.  
 FORD, H. HUBBARD [A.], Major R.E.  
 FOWLER, N. H. [A.], Lieut. R.A.  
 FOX, OWEN W. [S.], Q.M.S. R.E.  
 GEDDES, C. W. [L.], 2nd Lieut. R.E.  
 GODFREY, W. E. [A.], Capt. R.E.  
 GRIFFIN, J. O. [A.], F/Lieut. R.A.F. V.R.  
 HAYES, A. J. [L.], Major R.E.  
 HENZELL-ASCROFT, F. N. W. [L.], 2nd Lieut. R.E.  
 HINDERER, C. M. Boys [F.], Capt. King's African Rifles.  
 HITCH, J. S. [S.], Sgt. The Buffs.  
 HOBBS, M. A. H. [A.], Major R.A.  
 HOGGEN, D. A. [A.], Capt. R.E.  
 HOUGH, J. H. E. [A.], 2nd Lieut. R.E.  
 HOUGHTON, J. [S.], Sgt. R.E.  
 HUMPHREY, E. [L.], 2nd Lieut. R.E.  
 HUSSEY, G. MARK [A.], Lieut. S.A.E.C.  
 HUTBER, F. H. [L.], A.C.2 R.A.F.  
 INGOLDSBY, E. [S.], Spr. R.E.  
 JACKMAN, P. E. [L.], F/Lieut. R.A.F.  
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 LAWSON, P. D. [A.], Pilot Officer R.A.F.V.R.  
 LEE, F. C. B. H. [S.], Cpl. R.A.F.  
 LONG, G. F. [L.], E.D. L/Cpl. R.E.  
 LUSTY, R. C. [S.], S/Sgt. R.E.  
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 PEACE, F. NORMAN [A.], Lieut. R.N.V.R.  
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 REDFERN, E. B. [A.], Cpl. County of London Yeomanry.  
 ROBINSON, E. J. M. [L.], 2nd Lieut. R.E.  
 RUNNICKES, C. G. [A.], 2nd Lieut. R.E.  
 RUSHWORTH, J. N. [S.], O/Cadet R.E.  
 SCHFIELD, J. A. [A.], Lieut. R.N.V.R.  
 SHAEP, C. B. [A.], Capt. R.E.  
 SIDEBOTTOM, P. B. [A.], 2nd Lieut. R.E.  
 SIMPSON, J. R. MOORE [A.], Squadron Leader R.A.F.  
 SMITH, C. K. G. [S.], O/Cadet R.E.

SMITH, L. M. [S.], Cpl. Intelligence Corps  
 STOUT, G. R. [A.], 2nd Lieut. R.E.  
 SUTTON, R. W. [S.], Lieut. R.A.  
 TATE, J. W. [S.], Lieut. R.A.  
 TATTERSFIELD, L. [L.], 2nd Lieut. R.E.  
 TAYLOR, JOHN P. [A.], Major R.E.  
 TAYLOR, L. C. R. [L.], Lieut. R.E.  
 TAYLOR, P. B. [A.], Signm. R.C.S.  
 TERRY, L. J. [S.], E.D. L/Cpl. R.E.  
 THREADGOLD, R. A. [F.], Lieut. R.E.  
 TIMMIS, G. J. [A.], 2nd Lieut. R.E.  
 TOMPKIN, HARRY [S.], Sgt. R.A.F.  
 TOOLEY, C. E. [S.], Sub/Lieut. R.N.V.R.  
 TOWLE, C. [A.], F/Sgt. R.A.A.F.  
 TRUSTAM, W. J. [S.], Sapper R.E.  
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 TWEDDELL, N. [A.], Lt.-Col. R.A.  
 TYNDALL, D. A. [L.], Capt. R.E.  
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 VICKERY, M. E. [S.], Bdr. R.A.  
 VOSPER, N. L. A. [A.], Capt. R.W.F.  
 WALDRON, H. G. A. [L.], Capt. R.E.  
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 WALKER, COLIN [S.], O/Cadet R.E.  
 WALLWORK, A. J. [S.], Ord/Sea. R.N.  
 WARDLE, L. T. [A.], 2nd Lieut. R.E.  
 WARK, W. R. [S.], Capt. R.E.  
 WARREN, E. P. [A.], Lieut. Recce Coy.  
 WARRINER, R. H. [S.], L/Cpl. R.C.S.  
 WELLER, J. O. [L.], Cadet Royal Berks Regt.  
 WEST, J. C. P. [L.], 2nd Lieut. R.E.  
 WESTROPE, F. H. [S.], Sapper R.E.  
 WHITE, H. H. [A.], Cadet R.E.  
 WHITESIDE, W. J. [A.], Major Corps of Indian Engineers.  
 WHITFIELD, K. W. [S.], 2nd Lieut. R.E.  
 WILLIAMS, B. R. [S.], Sapper R.E.  
 WILLIAMS, C. P. [A.], Lt.-Col. R.E.  
 WILSON, HAROLD E. [A.], Sub/Lt. R.N.V.R.  
 WILSON, J. A. [S.], Capt. Punjabi Regt., Indian Army.  
 WILTON, DAVID [S.], Cadet Rating R.N.  
 WRIGHT, A. G. B. [L.], Capt. R.E.  
 WRIGHT, JOHN B. [A.], Gunner R.A.  
**DISCHARGED MEDICALLY UNFIT**  
 HEMINGWAY, R. [S.], Pte. R.A.P.C.

## THIRTIETH LIST

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 ARCHER, J. P. [S.], L/Cpl. R.E.  
 BALL, A. R. B. [S.], Pilot Officer R.A.F.  
 BARKER, J. C. [S.], 2nd Lieut. R.E.  
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 CHRISTIE, R. J. B. [A.], Lieut. R.E.  
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 DARBY, JOHN P. [A.], 2nd Lieut. R.E.  
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 DEUCHARS, J. [A.], Pilot Officer R.A.F.  
 DIXON, A. A. [S.], Pioneer Student R.E.  
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 DUNCAN, A. M. [S.], S/Sgt. R.E.  
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 FARROW, D. G. [S.], Sub/Lieut. R.N.V.R.  
 FELL, I. B. [A.], F/O. R.A.A.F.  
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 FLINDER, A. [A.], Cadet R.E.  
 GIBSON, C. E. D. [A.], A.C.1 R.A.F.

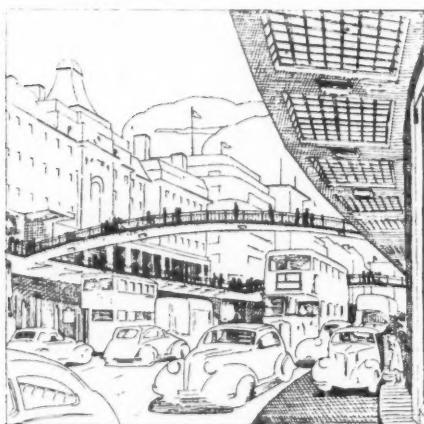
GLASS, C. W., O.B.E., M.C. [A.], Wing Comdr. S. Rhodesian Air Force.  
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 HICKLEY, W. D. [S.], Lieut. R.E.  
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 LAVENDER, E. P. [F.], Lieut. R.E.  
 LLOYD, E. T. [L.], Bdr. R.A.  
 LUMSDON, J. [S.], Cpl. R.A.F.  
 MARSHALL, A. J. R. [A.], Capt. R.E.

MARSHALL, H. D. [S.], Sapper R.E.  
 MARWICK, T. W. [A.], Capt. R.E.  
 MAY, E. W. [L.], 2nd Lieut. R.E.  
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 MILNES, FRED [L.], Capt. R.E.  
 MORGAN, B. J. M. [A.], Staff Major R.E.  
 MOULD, J. S. [A.], Lieut. R.A.N.V.R.  
 NORTH, L. C. [A.], A.C.2 R.A.F.  
 PEACE, D. B. [A.], Pilot Officer R.A.F.V.R.  
 PERCY, W. G. [L.], Capt. Rifle Brigade.  
 PERT, K. G. [S.], L/Sgt. R.E.  
 PETERSON, A. F. [A.], F/O R.A.F.V.R.  
 PILLING, R. S. [L.], Signmn. R.C.S.  
 RATCLIFFE, B. F. [A.], L/Cpl. R.E.  
 REID, K. C. [S.], L.A.C. R.A.F.

ROBIN, J. [A.], Lieut. R.N.V.R.  
 ROSE, C. G. [L.], 2nd Lieut. R.E.  
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 SMITH, S. W. J. [A.], Major R.E.  
 STAMFORD, A. B. [A.], Capt. R.E.  
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 SURMAN, J. M. [S.], Sgt. R.A.F.

SUTTON, J. B. [A.], A.S.U. R.A.A.F.  
 TAYLOR, A. R. [A.], Pilot Officer R.A.A.F.  
 THOMPSON, E. [A.], (A.C.2 R.A.F.V.R.), Royal Observer Corps.  
 TOPLIS, G. M. [A.], Sub/Lieut. R.N.  
 TUNSTALL, J. B. [S.], L/Cpl. R.A.O.C.  
 VAUGHAN, R. [A.], Capt. R.E.  
 VICKERY, D. J. [S.], Pte. P.T.W.  
 VINE, R. O. [A.], 2nd Lieut. R.E.  
 WELBOURN, A. E. [A.], A.C.2 R.A.A.F.  
 WHEATLEY, P. E. [S.], Sgt./Pilot R.A.F.  
 WHITTAM, J. [A.], Sapper R.E.  
 WILKINSON, E. V. [A.], Lieut. R.E.  
 WILLIAMS, A. L. [A.], 2nd Lieut. R.E.  
 WRITER, A. [A.], Lieut. R.E.

## Book Notes



**Town Planning and Road Traffic**, by H. Alker Tripp, C.B.E.  
 Edward Arnold. 1942. 10s.

Mr. Alker Tripp, as Assistant Commissioner of Police at Scotland Yard, is the authority on road accidents; he is the man who knows "the behaviour, habits and vices of road users"; he is the man who knows *why* accidents occur, and it is his considered opinion that they are chiefly due, not to the bad habits of road users, but to the bad layout of our roads.

This book, with its cogent recommendations for safer design, is therefore most opportune; it is, in fact, one more book for the architect to study, for as Mr. Tripp himself says, "The police can only deal with the disastrous effects of unsuitable layout, whereas the Town Planner can cope with the trouble at source."

That the matter is serious can readily be demonstrated by quoting some statistics given, i.e.: During the ten years preceding the war 68,248 persons were killed and 2,107,964 injured on the roads of Great Britain and, as is so aptly remarked, "Casualties on that scale are at battle level," or again, "Any town so planned that its citizens are killed and injured in vast numbers is obviously an ill-planned town."

The author's remedy is the cutting out of the nondescript road: roads should be classified into arterial, sub-arterial and local; the arterial to be dedicated to transit, the sub-arterial to link up the main arteries, and the inner roads to be designed to discourage through traffic.

It is this last idea—the idea of a new kind of "precinct" which is one of the most interesting in the book. Areas are to be cut off from the "lethal stream" and given up primarily to the pedestrian for shopping, business, amusement or residence. The Inns of Court are given, and rightly so, as an illustration of the idea, though the "precincts," as shown on the diagrams, too much resemble mazes and therefore will be painful to the architect.

But generally the book is well documented and gives valuable data on road layout in its widest aspect, with diagrams showing such

details as the necessary weaving lengths required for the various types of roadabouts. It is thought that these recommendations will go far to prevent more of those disastrous and costly mistakes already made in the layout of our roads. It would seem, indeed, the height of folly still to allow shopping areas to grow up at our main cross-roads, and still to play with such ideas as service roads for our great arterials, when it can be demonstrated that they are no solution to the problem. Certainly, if the advice here given is put into practice, the architect will be relieved of awkward acute angle building blocks; he will be encouraged to design squares and piazzas and, in especial, the curse of ribbon development will automatically disappear.

The other side of the problem must, of course, also be considered, i.e., not only replanning, but such matters as signal lights, wider pavements, guard-rails, subways, removal of standing vehicles on the one hand and, on the other, the improvement of the cause of all the pother—the motor car—to make it more controllable and less lethal; moreover, we must tackle the road users themselves, especially "that most inefficient traffic unit" the pedal cyclist, and too, the temper of the motorist—both frequent causes of road accidents. Mr. Alker Tripp deals with most of these points, but there is also one other matter always to keep in mind—that the method of propulsion may itself change.

EDWARD MAUFE [F.].

**Heating and Ventilating**, by Louis J. Overton, 4th edition edited by Frank Herod. Sutherland. 1942. 8vo. vi+296 pp. 16s.

Overton's *Heating and Ventilating* is a standard textbook the last edition of which was published shortly before the war: this new edition has been revised by Mr. Overton and retains all the useful features of the earlier editions which made it a good handbook for students and architects in practice. It must be regretted that the war price is so high despite the inclusion of advertisements and the economies in production consequent on the existence of blocks and a printed text from which to reset.

**Sixty Years of Planning: the Bournville Experiment**, Bournville Village Trust. 1942. 3s.

George Cadbury—whose intelligent and kindly face heads the foreword of this pamphlet—started his Bournville factory in 1878. The move from Birmingham to the open country was a progressive action, a mixture of benevolence and good business. Eighteen years later the same motives led to the second big advance: the foundation of a housing estate complete with schools, recreation and civic buildings, so that the workers might not only have the benefits of the close association of workplace and home but might have where they lived and worked everything necessary to a complete social life. Thus, several years before Howard's *Tomorrow* the Bournville garden city was in being. Its place in the history of town planning is well known, and so is the character of the influence of the Cadbury family on the development of benevolent housing activity—an influence which under the leadership of the present George Cadbury still survives; but this endeavour has never been displayed in a livelier, pleasanter form more in conformity with the "idea" than in this small booklet of photographs and text descriptive of the growth of the garden city. The Introduction gives a brief survey of planning in the past and then, by text and illustration, the work of founding and building Bournville is related with a pleasant informality of style. Among the photographs are several illustrating Bournville in the last century and many of its houses, churches, schools and clubs as they are to-day. The booklet

ends with a section, "Bournville in Figures," which gives the Estate as nearly 1,087 acres of which over 590 have been developed, apart from 1,500 acres of woodland. There are 2,390 houses of which the Trust owns, and is ground landlord of, 990. The death rate is 5.88 per 1,000, compared with Birmingham's rate of 11.14. Infant mortality is 34, compared with Birmingham's 65.42.

**Studio Decorative Art Year Book, 1942,** 4to. 128 pp. London. 1942. 9s. 6d. paper, 12s. 6d. cloth.

After the editor's foreword, this volume of the *Studio Year Book* starts with articles by Mr. Bosson on "The Golden Age of British Culture," Mr. C. G. Holme, the editor, on "Floorcoverings" and Mr. Gloag on "The Revolution in Materials." Mr. Bosson visualises a Golden Age succeeding the war if we make full use of our opportunities. "Let us not miss what may well be the last chance of making our Island Home the criterion of civilisation. The future is in our hands; let us erase blemishes wherever they may be found and in their place create æsthetic environment wherein charm and artistry, prosperity and health go hand in hand. What a glorious task! What responsibilities for those selected to build a better Britain!" Thus Mr. Bosson discusses the part the building industry must play in reconstruction and the need for *real planning*, and instances many details of domestic and communal life which are subjects for care and skill.

The body of the *Year Book* consists, as hitherto, of illustrations of recent decorative art, houses—mostly in America—and domestic equipment. The clients for whom the illustrations cater (all except two pages on the one-room apartment) are all of the wealthier part of society who are interested in the finer types of "one family house" and whose experience of good living compels attention to the "appurtenances to the aperitif," cocktail dispensaries and mural paintings in private dining rooms.

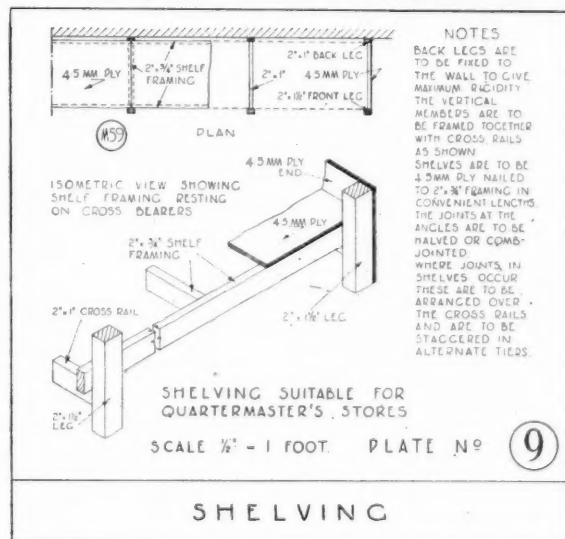
**Timber Economy, No. 3, Fitments.** H.M.S.O., 1s.

Detailed drawings showing timber saving forms of construction for racks, shelving, bins, cupboards and fitments for wartime hospitals, canteens, hostels, post offices, dry stores, quartermaster stores, cloak-rooms, trunk stores and factories have been gathered together by the Ministry of Works and Planning, and published in *Timber Economy, No. 3, Fitments* (H.M.S.O., price 1s. net).

These designs are another stage in the intensive study by the Ministry to secure economy in timber, and so of shipping space; they are being adopted forthwith in all Government work.

As one standard of timber (165 cubic feet) occupies as much shipping space as enough petrol to send a bomber to the Ruhr and back, more care than ever must be made to avoid waste. Demand therefore must be reduced to the minimum, while essential building must go on.

In general, the many ways in which the problem is being met fall under four heads: Economies are being made by using other materials than timber produced in Britain or more readily available; by introducing more economical methods of using timber in joinery and carpentry; by simplifying designs and lowering standards; and by new methods of using plywood. All these expedients are illustrated in the pamphlet by diagrams similar to the one reproduced here.



## Recent British Standard Specifications

### The Provision of Engineering and Utility Services in Buildings—British Standard Code of Practice B.S. 1043—1942

This Code of Practice is of considerable interest to architects, and gives guidance upon the provision necessary in new buildings for all normal services. It is in seven parts, and deals with definitions, matters affecting the planning of buildings, design and methods of distribution of services, proximity of services, fire risk, building by-laws, and transmission of sound from services; in addition to which there are four appendices, dealing with recommended scheme of planning, electrical sub-stations and transformer chambers, fuel storage, and suggested methods of providing fire-stops in ducts. The appendix dealing with the recommended scheme of planning is of particular interest and includes a schedule of precedence of services in planning, which has always been a difficult matter for an architect to decide.

P. V. B.

### Painting of Buildings in Wartime B.S. 1056—1942

The British Standards Institution has recently issued a pamphlet, *Painting of Buildings in Wartime* (B.S. 1056—1942), which indicates how paints and paint material can be most wisely used on buildings.

There are four schedules which deal in a very comprehensive manner with the different classes of buildings, new and old, likely to require painting, and giving details of the maximum extent of painting permissible thereon.

The foreword to the specification emphasises strongly that unnecessary initial painting or repainting should be avoided and that drastic changes in colour should not be made unless by so doing raw materials in short supply may be conserved.

It is pointed out that in the majority of cases, protective values and not appearance is the governing factor, so that painting should only be carried out: where it is the only practicable means of preserving the fabric of the building, and then only to the minimum extent consistent with the necessary preservation; to give a necessary amount of light reflection internally; to make possible hygienic conditions in special situations, e.g., parts of hospitals, food factories and the like, and for camouflage purposes.

Copies may be obtained from the B.S.I. price 2s., 2s. 3d. post free.

### Substitute Paints—Exterior Finishing B.S. 1057

A new British Standard has been published of *SUBSTITUTE PAINTS—Exterior Finishing*.

This specification has been prepared to provide for the types of paint to replace "oil paints" where this is possible. Some of the paints specified are, therefore, complementary to, and not necessarily wholly in substitution for, B.S. 929, which provides for reduced standards of oil paint. It is important in the national interest that these "substitute paints" should be used whenever possible.

Paints have already been developed using wool grease and aromatic petroleum residues in substitution of oil, but with the changing supply position it may well be that still further substitution must be adopted.

This specification is very wide in scope; it does not include details of chemical composition and is based essentially on performance requirements.

The only limitations that have been imposed in regard to composition are those given in Appendix A where, in the event of certain materials being employed, the proportions in which they may be used is limited. The limitations are based on the supply position at the time of publication of the specification, and may be varied or new materials added from time to time.

Copies of this specification may be obtained from the B.S.I., 28 Victoria Street, 2s. 3d. post free.

### P.A.D. For Factories, Etc., in Northern Ireland

An order, the *Civil Defence (Amendment of Code) Order (Northern Ireland), 1942*, relating to air-raid shelters for persons working in factory premises and commercial buildings, has been made by the Ministry of Public Security, Northern Ireland. Copies of the order, entitled *Air-Raid Shelters in Commercial Buildings and Factories*, may be obtained from H.M.S.O., 80 Chichester Street, Belfast, price 6d.

## Notes

### JOURNAL INDEX AND BINDING

Volume 49 of the 3rd Series of the R.I.B.A. Journal was completed with the publication of the October issue. The Index is being published separately and will be sent free without further request to all who received the Index last year. Those who want the Index and who do not receive copies by the end of November should notify the Editor.

We hope that it will be possible to provide bound volumes of the R.I.B.A. Journals as in previous years. Though the difficulties of getting binding orders fulfilled are considerable we shall be glad to receive orders, and will notify all those who order bound volumes if it proves impossible to fulfil their orders. The styles are as follows: Bound in paper sides and with strong linen back; cost 3s. 6d., post free. Bound in full buckram boards, gilt lettering. It has not been possible yet to obtain a price for these or for the provision of separate binding cases, but the prices are unlikely to be substantially, if at all, increased on last year, when fully-bound volumes cost 7s., and binding cases 4s. 6d.

### A LETTER FROM TASMANIA

*The following is part of a letter sent to Mr. Ansell by Mr. H. S. East [F.], of Tasmania, in reply to a letter from the President congratulating him on 50 years membership of the R.I.B.A. :—*

I cannot say how much I appreciate your kindly letter and how pleased I am that so many of the Council members have kept my memory green.

However, I feel, as I think Churchill said the other day, "the boot is on the other leg," and any little services I have been able to render to the Institute do not tell against the help it has been to me.

To adequately express my feeling, I must indulge in a little autobiography. I arrived in London in the middle of 1890 alone and practically without friends and with little money, not enough to pay for a return passage. I soon found work, but the pay was small and for a time I had to live hard. I soon made some very good friends with students, and I think I can say few have had so many good friends and helpers in the profession as I had. Among others long since passed away were Alexander Graham, J. M. Brydon and William Young; others nearer my own age, Guy Dawber, Walter Tapper, Harry T. Hare, and many others, have also gone to their long rest. I also recall many kindnesses I received from old members of the Institute staff.

I worked hard practically alone, for the most part with the Institute Library, and after some 16 months of sketchy preparation, managed to scrape through the Associate Exam. I recall, as though it were yesterday, how I attended the oral examination in fear and trembling (even a glass of port beforehand gave me no confidence!), to be immediately reassured by the kind reception of the chairman of examiners, Mr. Arthur Cates, who introduced me to the dreaded ogres at the various tables with the words, "Don't be too hard on him, he comes from a barbarous country so far away." The joke gave me so much confidence that, as I said before, I scraped through.

Some years afterwards, I was lucky enough to win the Soane Medallion. It was fortunate for me, although there were very many competitors, it was a mediocre year, and I was not proud of my effort; so little, indeed, that soon after I received the drawings I burnt them; but I was, and still am proud of being, the Soane Medallist.

Looking back I can see that any small successes I have had are almost entirely due to the Institute system of travelling scholarships, and this I feel sure can be said of other architects who have achieved real distinction.

You may think I have been too prolix and personal in writing as I have done, but I did not think I could show otherwise my great appreciation of the benefit my long association with the Institute has been to me. I am sure no one has a keener desire than myself for the continued prosperity and usefulness of the Institute, not only in the British Commonwealth, but, when we have won through, to the wide world.

I suffer many of the pains and penalties of old age, and share in the anxieties of the time, but I keep up a cheerful spirit as far as I can, and I can assure you your letter has not dampened it.

### THE CONVICTION OF REGISTERED ARCHITECTS OF CRIMINAL OFFENCES

Under section 7 of the Architects' Registration Act (1931) the A.R.C.U.K. have power to remove from the Register any persons convicted of a criminal offence. The Registrar does not always receive reports of such cases. The Director of Public Prosecutions has undertaken to inform the Registrar of cases which comes to his notice, but he only has knowledge of the special cases in which he is called in. For the remainder the Council must depend on information provided by the profession.

All architects who have knowledge of cases in which an architect has been tried and convicted are asked to communicate this knowledge to the Registrar, A.R.C.U.K., 68 Portland Place, London, W.1.

### PROFESSOR BUTLER TO RETIRE

Professor Rudolph M. Butler, M.Arch., F.R.I.A.I., [F.], for over twenty years Professor of Architecture at University College, Dublin, is to retire. He took over the chair of the faculty from Professor Scott, shortly after its establishment. Since then, the number of students of architecture at U.C.D. has grown from six to a hundred.

No successor has yet been appointed.

### CONTROL OF BUILDINGS AND AMENITIES UNDER THE WAR DAMAGE ACT

Notes were published in the August and September JOURNALS on the areas scheduled under the War Damage Act, section 7 (2). The following additional areas have now been included under the provisions of this section of the Act :—

Area in which no works costing more than £100 are allowed without prior submission to the Commission.

In the County Borough of Bristol, an area comprising the following wards: St. Michael, St. James, St. Paul, St. Augustine, St. Philip and St. Jacob South, Redcliff, Windmill Hill, Bedminster, and that part of Southville Ward to the east of the centre line of Ashton Avenue (7.10.42).

Area in which no work (other than temporary work) may be put in hand without prior submission to the Commission.

In the Borough of Bromley, an area comprised by the hereditaments Nos. 117, 119 and 121 Southborough Lane.

### THE INSTITUTE'S APPEAL

The following is the twenty-second list of donations received up to 6 October 1942 in response to the appeal issued to all members and honorary members and students on 16 December 1938.

Members who are contemplating making an increased payment of subscription, whereby the amount of the increase will be payable to the appeal fund, are reminded that if they are prepared to enter into an agreement for the payment of such increased subscription for a period of seven years or more they will be entitled to deduct income tax at the standard rate from the amount by which the subscription is increased.

Full particulars were published in the issue of the JOURNAL for 6 February 1939 and can be obtained an application to the Secretary, R.I.B.A.

#### DONATIONS

	£	s.	d.
F. P. Harrison [Student]	..	..	0 9 0
Anonymous	..	..	1 1 0
Thomas E. Scott [F.]	..	..	4 4 0

#### Increased Subscriptions

The following Member and Student have promised to increase their annual subscription and contribution by the amount and for the number of years inserted in brackets against their names :—

Professor L. W. Thornton White [F.]	..	..	£3 3 0 (1)
L. R. Barlow [Student]	..	..	0 10 6

a year until further notice

The donations and increased subscriptions or contributions received and promised and bank interest up to 6 October 1942 represent a total of £7,453 10s. 6d. This amount does not include increase of subscriptions or contributions promised for which no definite period is stated.

# Review of Periodicals

1942-43—I

## CIVIL, CIVIC, MILITARY

ARCHITECT AND BUILDING NEWS, 1942 Sept. 25, pp. 187-8 ;  
 BUILDER, Sept. 25, pp. 262-3 ;  
 BUILDING, Oct. ;  
 JNL. R.I.B.A., Oct., 220-1 ;  
 The Ministry of Works and Planning Directorate of Public Works' new Codes of practice and Standards committees: article, lists and (Br. and J.R.I.B.A.) charts.

ARCHITECTURE ILLUSTRATED, 1942 Aug. :  
 Public buildings in Southern Rhodesia, by W. J. Roberts [A.], director of public works. Plans and exteriors. (Further reference.)

ARCHITECTS' JOURNAL, 1942 Sept. 24, pp. 199-206 :  
 Municipal offices at Friern Barnet, by Sir John Brown and A. E. Henson [FF.].

ARKITEKT (Istanbul), 1940 Nos. 5-6 (recd. 1942), pp. 110-11 :  
 Central post office, Helsinki. By J. Järvi and E. Lindrovs. (From Arkkitehti.)

BUILDING (Sydney, N.S.W.), 1942 June 24, pp. 57-8 :  
 Barracks for shipment: prefab., demountable timber huts, with interesting collapsible ply box-constructed roof members.

ENGINEERING NEWS-RECORD (N.Y.), 1942 July 16, pp. 68-9 :  
 Prefabricated barrack or camp buildings in Albuquerque district by the U.S. Corps of Engineers, under L. Rosenberg, district engineer.

BUILDER, 1942 Oct. 16, pp. 330-1 :  
 "New camps for troops": description of the largest War Office project, with progress photo of an elliptical "Iris" hut of tubular steel.

ARCHITECT AND BUILDING NEWS, 1942 Sept. 25, pp. 190-91 :  
 Electrical primary sub-station for Coventry; D. E. E. Gibson, city architect, J. A. Miller and K. S. Lycett, assistants.

## COMMERCIAL

ARCHITECT AND BUILDING NEWS, 1942 Sept. 11, pp. 165-6 :  
 Shop interior to replace war-damaged building, including small exhibition of model fronts showing their history to date; by Grey Wornum [F.].

ARCHITECTURAL FORUM (N.Y.), 1942 Aug., pp. 86-8 :  
 Furniture shop in New York (ground floor and mezzanine), by Morris Ketchum & F. X. Gina.

ARCHITECTURAL FORUM (N.Y.), 1942 Aug., pp. 89-92 :  
 Administration bldg. (offices) for an industrial building in California; by E. T. Spencer.

COUNTRY LIFE, 1942 Sept. 4, pp. 452-3 :  
 Country banks: illustrated article by A. R. Chorlton.

SCHWEIZERISCHE BAUZEITUNG, 1942 July 18, pp. 30-33 :  
 Abattoir group at Schaffhausen; Schalch & Ruf, architects.

## TRANSPORT

ARCHITECTURAL REVIEW, 1942 Oct., pp. 81-4 :  
 Railway station in Essex for joint use of L.P.T.B. and L.N.E.R., and neighbouring electrical sub-station. Stanley Hall & Easton and Robertson, architects.

ARCHITECTURAL FORUM (N.Y.), 1942 Aug., pp. 46-8 :  
 Flying boat for transatlantic service, interior design; Henry Dreyfuss, designer.

ARCHITECTS' JOURNAL, 1942 Oct. 16, pp. 253-4, xxviii :  
 Commercial garage at Hatton, Middlesex; by Roper, Son & Chapman.

ARKITEKT (Istanbul), 1940 Nos. 5-6, pp. 115-7 :  
 Omnibus terminal station, Amsterdam, by H. G. J. Schelling; single large glass-sided hall. (From BOUWKUNDIG WEEKBLAD.)

ARCHITECTURAL RECORD (N.Y.), 1942 July, pp. 50-4 :  
 "Planning for planes": aerodrome runway plans, list of necessary elements, tables of U.S. standards, and expandable plan for an administrative building.

BUILDER, 1942 Sept. 11, pp. 217-21 :  
 Airports in the Channel Islands: Jersey and Guernsey. By Graham Dawbarn [F.] (Norman & Dawbarn).

## INDUSTRIAL

JOURNAL, ROYAL ARCHITECTURAL INSTITUTE OF CANADA, 1942 Aug., pp. 160-1, 162-6 :

Industrial buildings and the architect: article by R. E. Bostrom, and illustrations of Canadian examples.

CALIFORNIA ARTS AND ARCHITECTURE, 1942 May, and subsequent issues :

Industrial supplements: each dealing with current work of a contracting firm, including defence housing.

NATIONAL BUILDER, 1942 Oct., p. 31 :  
 Factory buildings on the outskirts of Stalingrad: three exteriors.

ARCHITECTURAL RECORD (N.Y.), 1942 Aug., pp. 45-7 :  
 Newspaper building, Asheville, U.S. ("A new bulwark of free speech"); Anthony Lord, architect.

CONCRETE, 1942 Sept., pp. 336-9 :  
 Cement factory at Des Moines, U.S.A., of all-concrete construction, with segmental roof; progress views, ext. perspective, and details.

ARCHITECTURAL REVIEW, 1942 Sept., pp. 73-4 :  
 "The Windmill": article by Thomas Hennell, illustrated.

## WELFARE: HOSPITALS, &c.

ARCHITECTURAL RECORD (N.Y.), 1942 Aug., pp. 51-68 :  
 Hospitals in time of war: building types study, by R. W. Sherman. Including food service equipment, air-conditioned nursery, "parallel service plan," emergency navy hospitals, pavilion wartime hospitals, and time-saver standards on war emergency hospitals.

IRISH BUILDER, 1942 Sept. 26, pp. 353-4 :  
 General hospital for county Kilkenny, near Kilkenny town; J. V. Downes, architect. 2 exts. and model.

ARKITEKT (Istanbul), 1940 Nos. 5-6, pp. 121-6 :  
 Latest Swedish hospitals: article from DEUTSCHE BAUZEITUNG. Illustrations from other countries.

HOSPITAL AND NURSING HOME MANAGEMENT, 1942 Sept., pp. 3-4 :  
 Hospital for railwaymen, Mexico, C. Greenham, staff architect; views and short article.

BUILDING (N.S.W.), 1942 May 25, pp. 32-3 :  
 Hospital at Victoria, Australia, for the Hamilton district—short article and view of model; Leighton Irwin & Co., architects.

BUILDING (Sydney, N.S.W.), 1942 June 24, pp. 34-5 :  
 The Royal Hospital for Women, Paddington, Sydney, N.S.W.: by Government architect of N.S.W. Views only.

BUILDER, 1942 Oct. 9, pp. 303-8 :  
 War emergency hospital for approx. 1,000 patients, and quarters for 348 nurses and sisters, and senior house staff and 54 medical staff. Departments include: physio-therapy, x-ray and dental, dispensary, laboratory, animal house, disinfectory, etc. Structure brick, except earliest-built huts in prefab. timber, all standard size huts. Also article on Emergency hospital programme of M.O.W.P.

ARCHITECTURAL RECORD (N.Y.), 1942 July, pp. 63-72, 73-8 :  
 Public health centres (medical centres): building types study, with 4 types of design and their equipment lists; also time-saver standards on health centre design data, including maternal and child health, venereal disease, and tuberculosis and X-ray clinics, laboratory, and nurses' rooms.

ARCHITECT AND BUILDING NEWS, 1942 Aug. 28, pp. 132-4 :  
 Nurses' home for the King Edward VII Sanatorium, Sussex; by Briant Poulter [F.].

ARCHITECT AND BUILDING NEWS, 1942 Aug. 14, pp. 97-104 ;  
 ARCHITECTS' JOURNAL, Aug. 13, pp. 104-7 ;  
 BUILDER, Aug. 7, pp. 110-4 ;  
 EDUCATION, Aug. 28 :

Day nurseries, hatted: 1. Hammersmith, by F. Douglas Barton, borough engineer (Nashcrete); 2. Barnet, and 4. Leitchworth, by Mauger & May and E. C. Kent (Maycrete); 3. Luton, by F. Oliver, borough engineer (again Maycrete).

ARCHITECTURAL DESIGN AND CONSTRUCTION, 1942 Oct., pp. 203-5 :  
 Day nursery in a department store (Bentall's), Kingston-on-Thames, for children of employees. Architect unstated.

## MINERS' WELFARE; RESTAURANTS, BATHS, PAVILIONS

ARCHITECTURAL DESIGN AND CONSTRUCTION, 1942 Oct., pp. 208-10 :  
 Miners' Welfare Commission buildings, continued: pithead baths, S. Yorkshire, by W. A. Woodland [F.]; community and miners' welfare centre for Kells and district, by J. A. Dempster [F.] and H. Smith [L.].

BUILDER, 1942 Oct. 2, pp. 286-7 :  
 Communal restaurant, Liverpool (Athol Street), occupying railway arches; L. H. Keay [F.], city architect, F. H. Morley [A.], assistant in charge.

SCHWEIZERISCHE BAUZEITUNG (Zürich), 1942 July 4, pp. 1-11 :  
 Swimming bath building (covered) at Zürich; H. Herter, city architect. Illustrated article, including isometric showing water purifying and heating equipment.

SCHWEIZERISCHE BAUZEITUNG, 1942 Aug. 8, pp. 70, 71 :  
 Open-air music pavilion or shell at Schaffhausen; in an article on the works of Carl and Max Werner.

## HALLS, ENTERTAINMENT BUILDINGS

ARKITEKT (Istanbul), 1940 Nos. 5-6 (recd. 1942), pp. 108-9 :  
 Large Nazi assembly hall, 160 x 64 metres, single-span roof springing

from ground level. Architect, E. Krüger. (From *MODERNE BAUFORMEN*.)

HEATING AND VENTILATING ENGINEER, 1942 Sept., pp. 82-5 : Atmosphere research in theatres and cinemas, a survey in Bristol by the District Health Officer ; article by G. Morley Davies, with tables.

ARKITEKT (Istanbul), 1941 Nos. 7-8 (recd. 1942), pp. 164-74 : Evolution of theatre design, illustrated article from DER BAUMEISTER.

ARCHITECTURAL FORUM (N.Y.), 1942 Aug., pp. 83-5 : Recreational centre project at Key West, U.S. ; Walter Gropius with Konrad Wachsmann, architects.

REVISTA DE ARQUITECTURA (Buenos Ayres), 1940 Apl., pp. 250-7 : Shooting gallery building—"Tiro Federal Argentino"—at Buenos Ayres ; architect unstated.

## EXHIBITIONS, TEMPORARY BUILDINGS, BRIDGES

ARCHITECT AND BUILDING NEWS, 1942 Sept. 4, pp. 141 : ARCHITECTS' JOURNAL, Sept. 17, p. 178 : Unit exhibition stand, designed by John Grey [F.] for the D.I.A. exhibition, "Design round the clock" : scale drawings.

ARCHITECTS' JOURNAL, 1942 Sept. 17, pp. 185-7, 178 : Three exhibitions in London : Shop Development, at Harris & Sheldon's, by Grey Wornum [F.] (view—see also under Shops) ; Fuel, at Harrod's, part by Rodney Thomas [A.] (view of exhibit) ; and D.I.A. (further reference).

ARCHITECTURAL DESIGN AND CONSTRUCTION, 1942 Oct., p. 207 : Exhibitions : at the Geffrye Museum, Shoreditch, in "Art for the people" series ; and "Design round the clock" (further reference).

ARCHITECT AND BUILDING NEWS, 1942 Aug. 28, pp. 125-6 ; BUILDER, Aug. 28, pp. 176-7 ;

BUILDING, Sept. ; CONCRETE, Oct. ; JNL. R.I.B.A., Sept., 1934, 181 ;

OFFICIAL ARCHITECT, Sept., p. 419 : Standard hut for army camps or hostels, of reinforced concrete, for M.O.W.P. ; plan, details and views of erected specimen, showing use of 'A-frames' for hoisting units into position. (CONCRETE) constructional details.

ARCHITECTS' JOURNAL, 1942 Sept. 17, pp. 183-4 : Waterloo Bridge (continued) : original and final designs of 1934 and 1935, and views from beneath of the new bridge (1937-42).

RELIGIOUS

ARCHITECTURE ILLUSTRATED, 1942 Sept. : All Hallows, N. Greenford, by C. A. Farey [F.], further reference : views.

ARCHITECT AND BUILDING NEWS, 1942 Sept. 18, pp. 176-8 : Church at Edensor, Longton, by Wood, Goldstraw & Yorath [FF.] ; ultimate plan shortened for immediate building.

PENCIL POINTS, 1942 July, pp. 59-63, 75 : Timber Catholic church at Portland, Oregon.

BUILDER, 1942 Oct. 23, pp. 348-51 : Catholic Cathedral, Kilmore, Cavan, by W. H. Byrne & Son [A.], recently completed. The old cathedral (1824 ff.) to be re-erected elsewhere.

WERK (Zürich), 1942 Aug., pp. 180-5 : Church and monastery of the Sacred Heart at Bellinzona ; including external sculptures and internal frescoes.

SCHOOLS

WERK, 1942 July, pp. 158-70 : Schools : primary school at Zürich-Zollikon, by J. Kräher and Bosshardt ; elementary schools at Obermeilen, by K. Bebi, Willisau, by W. Ribary, and Tauffelen, by E. Balmer ; secondary school at Obfelden, by A. H. Steiner.

SCHWEIZERISCHE BAUZEITUNG, 1942 July 11, pp. 18-21 : Competition plans for a modern school ("Ebnetareals samt Realschulhaus") at Herisau.

REVISTA DE ARQUITECTURA (Buenos Ayres), 1942 Apl. : School and hostel, "Hogar Mercedes de Lasala y Riglos," Buenos Ayres, by the Inspectorate-General of the municipality ; M. D. Aquilar & P. P. Lanz, architects. Urban block with enclosed courtyard spaces.

ARCHITECT AND BUILDING NEWS, 1942 Oct. 9, pp. 26-8 : Senior school, Dorchester, by H. E. Matthews [A.], county architect, and C. Fifield [L.], assistant architect.

BUILDER, 1942 Oct. 2, pp. 284-5 : Senior school at Frome ; R. O. Harris [A.], county architect, P. C. Teague [L.], assistant.

ARCHITECTS' JOURNAL, 1942 Oct. 1, pp. 217-22, xxvii : Senior elementary school at Scalby, Yorks. : by F. X. Velarde [A.], opened by W. H. Ansell [P.].

## TRAINING COLLEGES ; TECHNICAL COLLEGES ; LABORATORIES

ARCHITECTURAL FORUM (N.Y.), 1942 Aug., pp. 34-45 : U.S. naval training centre, Great Lakes, Ill. School and training buildings ; administration building, with 112-ft. laminated wood arch ; barracks, dining halls, theatre, swimming bath and officers' houses.

OFFICIAL ARCHITECT, 1942 Oct., pp. 451-60 : Village colleges in Cambridgeshire : further illustrated article and notes of the Scott Committee's reference : Sawston, Linton, and Impington, and a comment.

PENCIL POINTS (N.York), 1942 Aug., pp. 34-70 : Bell Telephone Laboratories, Murray Hill Unit. A most important group of buildings by Voorhees, Walker, Foley & Smith for one of the most scientifically organised industries in U.S.A. Buildings include testing house for electrical equipment, research laboratories, including acoustics lab. with auditorium, drafting rooms, individual research workers' labs., etc. ; offices, staff club rooms. Structure, mech. services and equipment illustrated.

MUSEUMS, LIBRARIES, SOCIETIES' BUILDINGS

MUSEUMS JOURNAL, 1942 Oct., pp. 163-5 : Art gallery and museum, Salford, extension described by H. J. M. Maltby, Director.

WERK (Zürich), 1942 Aug., pp. 177-9 : Library for the Ticino canton at Lugano ; by C. & R. A. Tami. Separate stack block, with space for repeats.

REVISTA DE ARQUITECTURA (Buenos Ayres), 1940 Apl. (recd. 1942), pp. 260-71 : "Sven Markelius and the House of the Architects" at Stockholm—article by Giuseppe Pagano, translated from CASABELLA. With constructional details.

DOMESTIC

NATIONAL BUILDER, 1942 Sept., pp. 18-20 : The balloon house or hut, invented in America by Wallace Neff : article by R. Myerscough-Walker, with progress photographs.

HOUSING

BUILDER, 1942 Aug. 28, pp. 171-3 : Age groups in housing : surveying existing accommodation. Article, with illustrations of street house plans and details at various periods.

CALIFORNIA ARTS AND ARCHITECTURE, 1942 May : "Blueprint for war housing" : scheme for light-construction, diagonally-planned houses, by J. A. Stein.

ARCHITECTURAL REVIEW, 1942 Sept., pp. 58-61 : Ministry of Supply housing : semi-detached and terrace houses for factory workers, D. W. Plumstead and Anthony Pott resident architects ; G. A. Jellicoe [F.], architect.

PENCIL POINTS, 1942 July, pp. 27-56 : Defence housing schemes at Elm Haven, New Haven, by D. Orr and R. W. Foote ; Clifton, N.J. (Acquackanonk), by H. S. Churchill ; portable houses for T.V.A., and "trailer houses," fitted with wheels.

ARCHITECTURAL DESIGN AND CONSTRUCTION, 1942 Aug., pp. 152-63, 167 : Defense housing in the U.S. : article illustrated from the ARCHITECTURAL FORUM, under 3 heads—permanent, temporary, portable.

ENGINEERING NEWS-RECORD (N.Y.), 1942 Aug. 13, pp. 80-5 : "5,000 houses in 5 months" : prefab. demountable houses for defence site, showing use of templates for measurements and jig platforms for pre-assembly. 53 pieces of framing per house. Plan and progress views.

BUILDER, 1942 Sept. 4, pp. 196-9 : U.S. war workers' housing under the Federal Public Housing Authority. Mobile lavatory and laundry, and trailer housing units ; schemes at Tampa, Florida ; Greenbelt, Maryland (with cinema) ; Riverside, California.

CALIFORNIA ARTS AND ARCHITECTURE, 1942 Apl., pp. 27— : "New approach to large-scale housing" : defence housing scheme in U.S., permanent construction (place unstated), under F.W. Agency—W. W. Wurster, architect, Fred Langhorst in charge.

ENGINEERING NEWS-RECORD (N.Y.), 1942 July 16, pp. 82-4 : "War housing for peacetime use" at Fort Benning, U.S., for the Public Buildings Administration ; N. A. Melick, supervising engineer.

ENGINEERING NEWS-RECORD (N.Y.), 1942 July 23, pp. 10-11 : "Building 40 houses a day" : prefabricated houses near Mare Island navy yard ; Franklin & Kump, with W. W. Wurster, architects, for F.P.H.A.

ARCHITECTURAL RECORD (N.Y.), 1942 July, pp. 48-9 : "56 houses a day" at Portsmouth, U.S., for the F.P.H.A. ; Harland Bartholomew and Associates.

## HOUSING AND PLANNING NEWS-BULLETIN (N.H.T.P.C.), 1942

Sept.-Oct.:

Post-war housing standards: evidence submitted by the National Housing and Town Planning Council to the Ministry of Health's Central Housing Advisory Committee.

## FLATS

BUILDING, 1942 Oct., pp. 214-7:

"Bungalow flats," article by Walter Segal on flat planning, dealing particularly with noise avoidance by plan arrangement and plan flexibility.

ARCHITECTURAL DESIGN AND CONSTRUCTION, 1942 Aug., pp. 168-9: Block of flats in Tel-Aviv for Central-European refugees; H. J. Reifenberg, architect. Staggered-balcony elevation.

## CLUBS; HOTELS, HOSTELS

ARCHITECTURE ILLUSTRATED, 1942 Sept., pp. 106-13:

R.A.C. country club, Woodcote Park, Epsom; by Mewès & Davis. Plans and views.

ARKITEKT (Istanbul), 1940 Nos. 5-6, pp. 112-4:

Large holiday hotel or hostel by beach, the "Montecatini," at Cervia (?). (From CASABELLA.)

ARCHITECTURAL RECORD (N.Y.), 1942 Aug., pp. 14, 16:

Hotel Statler, Washington, for increasing government staff; by Holabird & Root with A. R. Clas: plan, progress views, and built-in bedroom equipment diagram.

ARCHITECTURAL RECORD (N.Y.), 1942 Aug., pp. 32-6:

"Duration dormitories" or hostels: notes on the technical problem, by F. L. Ackerman. Specimen layout plans, plans of dormitory, dining, infirmary, and management blocks, and constructional details.

ARCHITECTURAL DESIGN AND CONSTRUCTION, 1942 Sept., pp. 173, 179-87:

"Housing for war-workers": hostels for the single, married quarters, canteens, community centres; Sir Alexander Gibb & Partners, consulting engineers. Fully illustrated article.

BUILDER, 1942 Aug. 21, pp. 152-6:

Hostels for the Ministry of Agriculture at Northchurch and Welwyn, using "Maycrete" huts; Stanley Hall & Easton and Robertson.

PARTHENON, 1942 Sept., pp. 168-71:

Y.W.C.A. hostels, three types on the elliptical-roofed "Tarran" system; K. J. Lindy, architect.

ARCHITECT AND BUILDING NEWS, 1942 Sept. 11, pp. 162-4:

Hostel in the north of England for the M.O.W.P.; by G. Grenfell Baines (A.). Plan and landscape views.

ARCHITECTURAL RECORD (N.Y.), 1942 July, pp. 40-7:

Residence halls (hostels) for women at Washington, D.C.—George Howe, supervising architect—and duration dormitories for war workers in various centres, by Paul Nelson; with community buildings.

ARCHITECTURAL FORUM (N.Y.), 1942 Aug., pp. 60-63:

Residential hotels or hostels mainly for single women in government service, Washington (Meridian Hill and Scott's).

## FARMS

TASK, 1942, No. 2, pp. 4-9:

Social planning for Western (U.S.) agriculture; by Vernon de Mars. Views of a farm settlement and community buildings.

## COUNTRY AND SMALL HOUSES

PENCIL POINTS (N.Y.), 1942 Aug., pp. 76—:

Toward true modernism: article by Antonin Raymond, with illustrations of his house near Montauk Point, on S. shore of Long Island, including constructional details.

CALIFORNIA ARTS AND ARCHITECTURE, 1942 Apr.:

House at Phoenix, Arizona, in the desert, by Frank Lloyd Wright.

COUNTRY LIFE, 1942 Sept. 18, pp. 558-9:

Country houses after the War: v. "A romantic retreat," design by Oliver Hill.

ARCHITECTURE ILLUSTRATED, 1942 Aug., pp. 99-100:

Houses on the "High and Over" estate, Amersham, by Connell & Ward [A.A.]; 2 exts.

## DOMESTIC DEPENDENCIES

ARCHITECTS' JOURNAL, 1942 Aug. 27, pp. 135-43:

"The hub of the house": report on kitchen design by the Association for Planning and Regional Reconstruction. Diagrams includes cupboard units, alternative plans and elevations for various sizes of family, and utensil sizes.

ARCHITECTS' JOURNAL, 1942 Sept. 17, pp. 188-9:

Mobile kitchen, chiefly for emergency air-raid feeding; by R. Fraser Reekie [A.].

PENCIL POINTS (N.Y.), 1942 Aug., p. 89:

Kitchen storage: data sheets.

## CRAFTS

STUDIO, 1942 Sept., pp. 81-92:

The Church and the artist; article by the Bishop of Chichester (Dr. Bell), with illustrations of mediæval and recent craftsmanship.

JOURNAL, BRITISH SOCIETY OF MASTER GLASS-PAINTERS, 1942,

viii No. 4, pp. 145-8:

Bibliography of works by F. Sydney Eden on ancient stained and painted glass.

## ARCHITECTURE (generally)

SOUTH AFRICAN ARCHITECTURAL RECORD, 1942 July:

Special number on University of Witwatersrand School of Architecture, illustrating students' work and buildings of some past students.

ARCHITECTURAL REVIEW, 1942 Sept., pp. 55-7:

"Sheep in Wolf's Clothing": leader by J. M. Richards on the architectural interests of Edgar Allan Poe.

## HISTORY

ARCHITECTURAL REVIEW, 1942 Oct., pp. 78-80:

The architectural tradition of Japan: review, with a view, an elevation and a plan, by Peter Quennell, of Sadler's Short history of Japanese architecture.

BUILDER, 1942 Oct. 2, pp. 281-3:

"An early railway station": Nine Elms, original terminus of the London & Southampton Railway, by Sir W. Tite, 1837; also the adjoining Brunswick House, a Georgian house now used as a railway staff club. Illustrated article.

BUILDING, 1942 Sept., pp. 198-200; Oct.:

Wren churches: in Architectural casualties series. By Edward Harley. (Oct.): His Gothic-style churches.

ARCHITECTURAL REVIEW, 1942 Oct., pp. 87-96:

"Victorian necropolis": the cemeteries of London. Article by R. P. Ross Williamson. Kensal Green, Abney Park, South Norwood, Highgate, and Brompton; also individual mausolea, and a note on war damage to cemeteries.

COUNTRY LIFE, 1942 Sept. 11, p. 514:

"Largest tithe barn": interior of Harmondsworth, Essex, and exterior of Abbotsbury, with letters.

COUNTRY LIFE, 1942 Aug. 21, pp. 360-1:

"Norman Jew's House" and "Music House" in King Street, Norwich: illustrated article by W. Buxton.

COUNTRY LIFE, 1942 Oct. 16, pp. 746-9:

"A society of Scottish castles" (suggestion); by George Scott-Moncrieff. Illustrated article on the smaller castles.

JOURNAL OF THE JUNIOR INST. ENGINEERS, 1942 Oct., pp. 1-13:

Engineering prehistory by S. J. Moore; article with notes on primitive structures.

ARCHITECTURAL REVIEW, 1942 Sept., pp. 75-6:

Treasure hunt by P. F. R. Donner: continuation of series with study of Ernest Newton and C. F. A. Voysey styles of villa architecture in London.

ARCHITECTURAL REVIEW, 1942 Oct., pp. 97-9; Nov.:

Treasure hunt series: Army and Navy Stores, Victoria Street and vicinity (c. 1870-1938), with block plan, D. H. Evans, and other buildings. (Nov.): Including Hennebique's r.c. house at Bourg la Reine.

ARCHITECTURAL REVIEW, 1942 Oct., pp. 99-102:

Alfred Bartholomew (1801-45), "a pioneer of functional Gothic": article by G. G. Pace [A.]: reproducing diagrams on thrusts in historic buildings.

ARCHITECTURAL REVIEW, 1942 Sept., pp. 63-6:

Thomas Harris (author of "Victorian architecture"): illustrated article by Dudley Harbron [F.].

ARQUITECTURA (Habana, Cuba), 1942 July, pp. 251-2:

Sir Giles Gilbert Scott: biographical article and appreciation by Luis Bay Sevilla.

## DRAWING; PHOTOGRAMMETRY

KEYSTONE, 1942 Oct., p. 9:

Paper economy in the drawing office: summary of talk by a photographer, with diags.

ILLUSTRATED CARPENTER AND BUILDER, 1942 Oct. 9, pp. 400, 402, and subsequent issue:

Black-and-white drawing: articles by Sydney Castle [F.], illustrated.

REVISTA DE ARQUITECTURA (Buenos Ayres), 1942 June, pp. 256-60:

Perspective—"the fundamental problem generalised": illustrated article by A. Cottini.

RIVISTA TECNICA DELLA SVIZZERA ITALIANA (Lugano), 1942 July, pp. 105-11:

Terrestrial and aerial stereophotogrammetry: recent applications. Article, well illustrated, by A. Pastorelli.

## ARCHITECTURAL VOCATION AND PROFESSIONAL PRACTICE

ARCHITECTURAL RECORD (N.Y.), 1942 Aug., pp. 48-50 :  
 "Architects and engineers at work": results of questionnaire on pre-war, present and preparation-for-future occupations, in percentages.

BUILDER, 1942 Sept. 18, pp. 247-8 :  
 Cost-plus v. other contracting methods: letter from a quantity surveyor, A. D. Tisdall, in the correspondence on the subject.

JOURNAL OF CHARTERED SURVEYORS' INSTITUTION, 1942 Oct., pp. 176-9 :

Building and quantity surveying. Report of speech by Alan W. Davson, F.S.I., at Instn. of Civil Engineers' meeting, in the Structure of the building industry series.

## ALLIED ARTS

IRISH BUILDER, 1942 Oct. 10, pp. 369-70 :  
 "Architecture, painting and sculpture in search of a common grammar": article by W. Noel Moffett [A.]. Illustrated.

JOURNAL, ROYAL SOCIETY OF ARTS, 1942 Oct. 16, pp. 709-23 :  
 Art in India and external influences: illustrated paper by F. H. Andrews, former curator of Delhi museum. With Western Romanesque comparisons.

## BUILDING

COUNTRY LIFE, 1942 Oct. 16, pp. 740-1, and subsequent issues :  
 What is wrong with building?—I. Building for the future, by Francis Lorne.

BUILDER, 1942 Oct. 16, pp. 332-3 :  
 Architectural science—the scientific background to architectural practice: first of R.I.B.A. Architectural Science Board's lectures, by Councillor G. L. Greaves.

## STRUCTURAL ELEMENTS

BUILDING, 1942 Sept., pp. 202-3 :  
 Maximum roof pitches and underslung purlins: in R. V. Boughton's Post-war construction series.

ILLUSTRATED CARPENTER AND BUILDER, 1942 Oct. 9, p. 404 :  
 Roof construction; start of new series by Edgar Lucas.

BUILDING, 1942 Oct., pp. 228-9 :  
 Plastered v. modern ceilings in Post-war construction methods series by R. V. Boughton.

ENGINEERING NEWS-RECORD (N.Y.), 1942 July 16, pp. 75-6 :  
 Laminated (glued) timber beams as sills for a gymnasium in Seattle.

## FORMWORK

ENGINEERING NEWS-RECORD (N. York), 1942 Aug. 27, pp. 66-8 :  
 "Planned formwork speeds construction", article descriptive of formwork for large block of r.c. framed tenements in New York.

## BUILDING PRACTICE AND INDUSTRY

BUILDER, 1942 Sept. 18, pp. 239, 245 :  
 Structure of the building industry: George Hicks, Parliamentary Secretary to M.O.W.P., speech to the Institution of Civil Engineers.

BUILDER, 1942 Sept. 25, p. 270 :  
 The Structure of the building industry: contribution by A. W. Davson, chairman of the C.S.I. Quantity Surveyors' Committee, to discussion after George Hicks's talk on building relationships.

ARCHITECTS' JOURNAL, 1942 Oct. 1, pp. 223-4 ;  
 JOURNAL R.I.B.A., Sept. :  
 and other notices :

Conferences convened by the I.C.E. Speeches by Mr. Ansell [P.] (J.R.I.B.A.) (further reference), and George Hicks, Parliamentary Secy. to M.O.W.P. (A.J.)

BUILDER, 1942 Oct. 2, p. 291 :  
 Production committees for building? Debate at A.A.S.T.A., including speeches by Mr. Cruikshank and Jack Ryan, of the A.U.B.T.W.

## MATERIALS; PREFABRICATION; CONSTRUCTION

JOURNAL OF INST. HEATING AND VENTILATING ENGINEERS, 1942 Aug.-Sept., pp. 106- :

The measurement of the thermal conductivity of materials used in building construction, by Ezer Griffiths, D.Sc., F.R.S. An important paper on measurement technique, including also 20 tables of conductivity figures for various materials.

ILLUSTRATED CARPENTER AND BUILDER, 1942 Aug. 21, pp. 210, 212 :  
 "For and against prefabrication," continued: A. Trystan Edwards [F.] and Edgar Lucas. With illustrations of a "unit house" of Celotex in the U.S.

BUILDER, 1942 Sept. 25, pp. 268-9 :  
 The prefabricated house—"a plea for action"; article by T. W. Kennedy.

BUILDING, 1942 Aug.; Sept., pp. 205-7, Oct. :  
 Prefabrication, also "Unit planning"; by A. H. Barnes [F.] in the "Why" series. (Sept.): Dimensional simplification. (Oct.): Standardisation.

BUILDING, 1942 Oct., pp. 212-3, Nov. :  
 Prefabrication: short article and short "opinions" by architects, etc.

CONCRETE, 1942 Oct., pp. 355-7 :  
 "What is prefabrication?"—leader.

ARCHITECT AND BUILDING NEWS, 1942 Oct. 9, p. 21 :  
 Prefabrication & transport costs by Edwin Gunn [A.].

ARCHITECTS' JOURNAL, 1942 Oct. 8, pp. 231-2 :  
 Homosote [Homasote] House. An American prefabricating system described.

ILLUSTRATED CARPENTER AND BUILDER, 1942 Sept. 11, pp. 294, —6 :  
 Tiles, slabs, and bricks: in Edgar Lucas's Floorings and pavings series.

## SANITARY SCIENCE AND EQUIPMENT, PROOFING

ROYAL ENGINEERS JOURNAL, 1942 Sept., pp. 195-202 :  
 Camp sanitation: treatment and disposal of sullage water; illustrated article by Major H. H. Clay. (From JOURNAL R. SAN. I.; further reference.)

ENGINEERING NEWS-RECORD (N.Y.), 1942 July 30, pp. 69-71, 80 :  
 Sewage plant for an army camp on bio-filtration process; also note on a plant for smaller camps.

HEATING AND VENTILATING ENGINEER, 1942 Oct., pp. 139-43 :  
 The gas industry in relation to post-war domestic architecture: article, with tables, by E. Crowther.

OFFICIAL ARCHITECT, 1942 Aug., pp. 374-7, and subsequent issue :  
 The architect and illumination—post-war lighting; talk by Eduard Robbins. Article, illustrated by diagrams.

HEATING AND VENTILATING ENGINEER, 1942 Sept., pp. 77-82 :  
 "How standardisation would help heating engineers": article, with illustrative storage-cylinder dimensional charts.

ARCHITECT AND BUILDING NEWS, 1942 Oct. 2, pp. 12-4 :  
 Ventilation of the small house, by Edwin Gunn.

(To be continued.)

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MINISTRY OF HEALTH 691 : 940.6  
 [Economy in use of materials.] (Circular No. 2674.)

dupl. typescript. leaflet. 7". 1942. R.  
 Enclosing MINISTRY OF WORKS AND BUILDINGS: COMMITTEE ON BUILDING MATERIALS STANDARDISATION, Economy &c.

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 MINISTRY OF WORKS AND BUILDINGS: COMMITTEE ON BUILDING MATERIALS STANDARDISATION

Economy in the use of lead sheet and pipe &c. (E.M.I.) And Amendment.

dupl. typescripts. 13", 9" ; 8½". 1942. R.  
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 2 sets of each.

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- BRITISH STANDARDS INSTITUTION**  
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Masonic history old and new.  
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- INSTITUTION OF STRUCTURAL ENGINEERS**  
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\*The Bombed buildings of Britain. A record of architectural  
casualties : 1940-41. . . . With notes by John Summerson.  
11". (iv) + 140 pp. Lond. : Archl. Press. 1942. 15s. R. (2).  
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- DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH : BUILDING RESEARCH**  
Wartime building bulletins :  
699.895 : 72.025.1] 728 : 69.059.2
- No. 21. Notes on the repair of bomb-damaged houses.  
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- IRELAND : MINISTRY OF PUBLIC SECURITY**  
Air raid shelters for persons working in factories and commercial  
buildings. Amended code. (Statutory Rules and Orders of Northern  
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pam. 9 3/4". Belfast : H.M.S.O. 1942. 6d.  
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Transactions. Vol. lxii. 67th Session. . . . 1941 [1942]. R.  
SCIENCE (generally)  
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Memoirs and proceedings. Vol. lxxxiv (1939-41).  
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**COUNTRY LIFE, publ.** 91 (42.1) (084)  
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- HOMELAND ASSOCIATION**  
The Beauty of Hampshire. Camera pictures &c. By J. Dixon-  
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9 1/2". Lond. & Edin. 1927.  
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- FAURE (GABRIEL)**  
Rome. (The Picture guides series.)  
8". 151 pp. Lond. & Boston, U.S. : Medici Socy. [1926].  
—Both presented by Mr. B. A. P. Winton Lewis [A.].
- PLANNING, RECONSTRUCTION (physical and sociological)**  
**OLDACRE (W. B.) and MCKELLEN (G. D.)** 71 : 3 files  
A Memorandum on town planning and reconstruction.—"To take  
occasion by the hand . . .", cover title.—Planning and reconstruction.  
A memorandum, text heading title.  
pam. 10". n.p. [? 1942.] Presented.

- R.I.B.A. : RECONSTRUCTION COMMITTEE  
First general statement of conclusions. (From Journal R.I.B.A., Aug.) 71 : 3 R.I.B.A. file (dupl.) 71 : 3 files  
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- WEST MIDLAND GROUP ON POST-WAR RECONSTRUCTION AND PLANNING  
Constitution, organisation and research programme. 9½". Chicago. 1942. 71 : 3  
pam. 8½". n.p. 1942. 71 : 3 arch files  
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- AMERICAN LIBRARY ASSOCIATION  
The Booklist. A guide &c. (Vol. 38, No. 16, May 1.) Containing Postwar planning—a reading list. 9½". Chicago. 1942. 71 : 3 | 332.7
- DE MARÉ (ERIC S.)  
Britain rebuilt. (Social Credit Party.) pam. 8½". Lond.: Sidgwick & Jackson. [1942.] 2s. 6d. Presented by the Author [A.J.]  
71 : 3 | 5.0015 (73)
- GALLOWAY (G. B.)  
Postwar planning in the United States. [List of research agencies.] (Twentieth Century Fund.) Reprint. 9". xi + 158 pp. New York. 1942. Presented by the Fund.  
71 : 3 arch files
- TOWN AND COUNTRY PLANNING, RURAL PRESERVATION  
[REILLY (C. H.)]  
Physical reconstruction. The town of the immediate future. (University House broadsheets. University House, Bethnal Green.) dupl. typescript (printed cover). 13½". [1942.] Presented by Mr. J. L. Peterson, head of University House.  
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- MINISTRY OF WORKS AND PLANNING (formerly M— OF W— AND BUILDINGS, q.v.)  
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\*Final report. (Cmd. 6386.) [Uthwatt Committee.] 9½". Lond.: H.M.S.O. 1942. 2s. 6d. P. (2). 711.2
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National planning and re-development. (Design for Britain series, No. 6.) pam. 8½". Lond. [1942.] 6d. Presented by the Author [F.].  
711.3—162 (41.6)
- DAVIDGE (W. R.)  
Government of Northern Ireland. Ministry of Home Affairs. Preliminary report on reconstruction and planning. dupl. typescript. 14". 1942. Presented by the Author [F.].  
711.3—162 (797)
- WASHINGTON, state : W— STATE PLANNING COUNCIL  
The Elma survey. Grays Harbor county, &c. dupl. typescript, *Reprod.* cover. 11". Olympia, Wash. 1941. Presented by the Council.  
71 : 3 arch files
- NATIONAL GAS COUNCIL  
Lord Justice Scott Committee. Evidence submitted &c. dupl. typescript. 13". 1942. R. 711.32
- MINISTRY OF WORKS AND PLANNING: COMMITTEE ON LAND UTILISATION IN RURAL AREAS  
\*Report. [Lord Justice Scott's committee.] (Cmd. 6378.) 9½". Lond.: H.M.S.O. 1942. 2s. P. (2). 71 : 3 arch files
- NATIONAL COUNCIL OF SOCIAL SERVICE  
Social factors influencing the composition and size of an urban unit. 2 pts. dupl. typescript. 13". [1942.] R. MSS. 711.4—163 (42.74 L) + 711.553 (42.74 L)
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Group Thesis. Project for development of Leeds West.—Passenger transport centre. [P. A. E. Bryant, C. N. H—, and C. H. Hogley, members of group.] ob. 7½" x 11". typescript. D. & Repr. [1940.] Presented by bequest by the author, Serg.-Pilot Hardman [A.], through his father.
- Spiral binding.  
LING (ARTHUR)  
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The Reconstruction of Moscow. (From the Anglo-Soviet Journal, Apl.-June.) extract. 9½". n.p. 1942. 711.4—163 (47)  
Town planning in the Soviet Union. (Twenty years of reconstruction.) (From the Anglo-Soviet Journal, Oct.) extract. 9½". n.p. 1941.
- U.S. : FEDERAL HOUSING ADMINISTRATION  
A Handbook on urban redevelopment for cities in the United States, &c. (Form No. 2389.) 9½". ix + 105 pp. Washington : Supt. of Documents. 1941. (15 c.) R. 711.4—163 (73)
- With 2 Press-notices.
- MINISTRY OF TRANSPORT  
Memorandum on the layout and construction of roads. (Memorandum No. 483 (Roads).) [? Reprint.] 9½". + folding pls. Lond.: H.M.S.O. [1937] (1938). 6d. P. Additional copy.  
Layout and construction of roads. (Circular No. 484 (Roads).) leaflet. 9½". Lond. 1937. P. (3). Additional copies.
- NATIONAL TRUST &c.  
N— T— News. Vol. i, Nos. 11-13 (June-Dec. 1938) ; vol. ii, Nos. 1, 3 (Mar., Sept., 1939). 1938-39. [1942.] Report 1941-42. 719 (06)
- Properties acquired or protected during the year 1937-1938. 8½". Lond. [1938.] —Presented by Mrs. C. Beach.  
719.3 (42.57 O) + 711.4—163 (42.57 O)
- OXFORD PRESERVATION TRUST : COMMITTEE ON PLANNING AND RECONSTRUCTION  
Report. Part ii. pam. 7½". Oxford : U.P. 1942. 1s. R. Pt. i, [1941], is in library.
- Acknowledgment is made of gifts of books received during recent months from the donors named below. Need to economise space precludes full entries of other than recent works in the accession list, but detailed descriptions of the gifts recorded below can be obtained from the library.
- WORKS not recently published but new to the library from :—  
Mrs. C. R. Ashbee, from the library of C. R. Ashbee (106) ; The British Records Association (2 MSS.) ; Messrs. John Farrer & Sons [FF.] (2) ; Mr. Samuel Graveson, through Dr. Charles Holden [F.] ; Mr. B. A. P. W. Lewis [A.] (1) ; The Royal Institute of International Affairs (Chatham House) (2) ; Mr. J. A. Slater [F.] (1) ; Mr. Benjamin Walker [F.] on the fiftieth anniversary of his Associateship (1 MS.).  
DUPLICATES added to the Reference Library in case of the first two gifts and otherwise to the Lending Library from :—  
Mr. Mowbray A. Green [F.] (3) ; Mr. J. Alan Slater [F.] (1) ; Mrs. C. R. Ashbee (3) ; Mr. M. S. Briggs [F.] (1) ; Commander V. H. Goldsmith (1) ; Herts. County Council (1) ; The Library of Congress, Washington (3) ; Miss Olive Matthews (3) ; Messrs. Turners Asbestos Cement Co., through Mr. Kallmann (1) ; Anonymous presentations (11) ; Messrs. J. L. Wheeler and A. M. Githens, A.I.A.
- PRINTS AND DRAWINGS  
The following are brief notes of recent gifts of prints and drawings not previously recorded in the JOURNAL :—  
A collection of 335 18th-century measured drawings, mostly of Italian churches (3 vols.).  
Presented by Mr. Granville Proby, Clerk to the House of Lords.  
Working and other drawings of buildings by Sir Charles Barry and E. M. Barry, and other architects ; and engravings and lithographs.  
Presented by Mr. C. J. Marshall [Ret. F.].  
Other drawings from this collection have been sent to the Ministry of Works and Buildings.  
A collection of drawings, including those for J. Cromar Watt's "Examples of Greek and Pompeian decorative work," 1897.  
Bequeathed by Mr. J. Cromar Watt.  
1 drawing.  
Presented by Miss Vernon, daughter of Mr. George Vernon [F.], deceased.  
Collection of drawings of London towers and steeples.  
Presented by Mr. C. Harold Norton [F.], the draughtsman.  
Collection of drawings of mediæval buildings, by Thomas Healey, made c. 1825-55.  
Presented by Mr. F. H. Healey [A.], grandson of the draughtsman.

- Restoration of Mausoleum, Halicarnassos, by H. W. Law.*  
Presented by Mr. Theodore Fyfe [F.], the draughtsman.
- Ionic volute drawings by C. H. Gale.*  
Presented by the draughtsman [F.].
- Collection of drawings, etchings and reproductions of drawings, by F. L. Griggs.*  
Bequeathed by Mrs. Walter Millard.
- Collection of drawings and engravings.*  
Presented by Mr. Mowbray A. Green [F.].
- Working and other drawings of buildings by Sir George Gilbert Scott and others.*  
Presented by the Bodleian Library, Oxford.
- Photostats of a map of City of London with elevations of churches.*  
Presented by Mr. C. H. Collins Baker, Henry E. Huntington Library and Art Gallery, San Marino, California.
- 3 engravings (photostat reproductions).*  
Presented through Mr. John Summerson [A.].
- Photographs, mostly of post-1914-18 war Vienna housing and public and welfare buildings.*  
Presented by Mrs. T. La Chard, J.P.
- Five maps of U.S. cities.*  
Presented by Mrs. C. R. Ashbee from the library of C. R. Ashbee.
- Drury Lane Theatre share certificate, 1812, headed by vignette of theatre building.*  
Presented by the British Records Association.

## Membership Lists

### ELECTION: OCTOBER 1942

The following candidates for membership were elected in March 1943:—

#### AS ASSOCIATES (2)

DRIVER-JOWITT: EVELYN EDWIN ASHTON, Salisbury, S. Rhodesia.  
TOMASELLI: UGO, B.Arch.(Rand), Johannesburg, S. Africa.

### ELECTION: MARCH 1943

An election of candidates for membership will take place in October 1942. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary R.I.B.A. not later than Monday, 22 February 1943.

The names following the applicant's address are those of his proposers.

#### AS ASSOCIATES (2)

PLUNKETT: NORMAN WALDO [Passed a qualifying Examination approved by the R.A.I.A.], c/o Messrs. Purves & Purves, 448 Collins Street, Melbourne, Australia. L. M. Perrott, P. H. Meldrum and R. K. Stevenson.

ROSS: HERBERT KENNETH [Passed a qualifying Examination approved by the R.A.I.A.], c/o Messrs. H. E. Ross & Rowe, 16 Barrack Street, Sydney, Australia. A. G. Stephenson, D. K. Turner and applying for nomination by the Council under the provisions of Byelaw 3 (d).

### ELECTION: DECEMBER 1942

An election of candidates for membership will take place in December 1942. The names and addresses of the candidates, with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Byelaws are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary R.I.B.A. not later than Thursday, 10 December.

The names following the applicant's address are those of his proposers.

#### AS FELLOWS (4)

FAIRWEATHER: GEORGE [A. 1932], Mount House, Hadley Common, Barnet, Herts; 78 Parkway, Welwyn Garden City, Herts. G. A. Jellicoe, C. L. Gill and John Grey.

HEYSHAM: TERENCE ERNEST [A. 1921], 4 Verulam Buildings, Gray's Inn, W.C.; 29 Crofton Pound Hill, Orpington, Kent. Sir Edwin L. Lutyens, E. V. Harris and Edward Maule.

And the following Licentiates who are qualified under Section IV, Clause 4 (c) (ii) of the Supplemental Charter of 1925:—

BUTTRICK: WALTER HAMMOND, F.S.I., 43 Oswald Road, Scunthorpe, Lincs; 19 Vicarage Gardens, Scunthorpe. Applying for nomination by the Council under the provisions of Byelaw 3 (d).

WHITE: HERBERT JOHN, Rownhams Mount, Nursing, Southampton; "Westings," Regent's Park Road, Southampton. Lieut.-Col. R. F. Gutteridge, J. V. Nisbet and W. F. Hedges.

#### AS ASSOCIATES (14)

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

BALDWIN: JOHN RAYMOND, B.A.(Hons.Arch.) [University of Sheffield], 7 Grove Street, Hasland, Chesterfield. Stephen Welsh, H. B. Leighton and H. B. S. Gibbs.

BIRD: MISS JACQUELINE MARY ROWAN [The Technical College Cardiff], "St. Gildas," 41 Station Road, Llanishen, Cardiff. W. S. Purchon, Harry Teather and T. A. Lloyd.

BOAGEY: MISS DOREEN [Final], 6 Roundhill Road, Leicester. Francis Jones, G. A. Cope and A. F. Bryan.

COLLIER: JOHN MASEFIELD [Birmingham School], 248 Birchfield Road, Redditch, Worcs. George Drysdale, T. M. Ashford and Herbert Jackson.

DANNATT: JAMES TREVOR [The Polytechnic, Regent Street, London], "Dunollie," Church Road, Halstead, Sevenoaks, Kent. Joseph Addison, E. C. Scherrer and R. F. Reekie.

HORTON: EDMUND NIXON [Special Final], Arrotor, Woodlands, North Gosforth, Newcastle-upon-Tyne, 3. W. B. Edwards, L. S. Stanley and R. N. Mackellar.

JOHNSON: SIDNEY ARTHUR ERNEST [Special Final], 55 Overhill Road, E. Dulwich, S.E.22. K. M. B. Cross, Joseph Addison and J. K. Hicks.

McKINLAY: ROBERT [Special Final], 29 Drums Avenue, Craigielea, Paisley, Renfrewshire. Applying for nomination by the Council under the provisions of Byelaw 3 (d).

MAYER: WILLIAM EDGAR [Final], c/o M.O.W.P., 26 Winckley Square, Preston. C. G. Agate, G. E. Tonge and F. L. Halliday.

RICHARDS: MISS HILDA GWYNDOLEN [Birmingham School], Hartshill Vicarage, Nuneaton, Warwickshire. George Drysdale, T. M. Ashford and Francis Lorne.

RUMSEY: MISS MARGARET [The Polytechnic, Regent Street, London], 46 Warren Road, Banstead, Surrey. Joseph Addison, E. C. Scherrer and J. K. Hicks.

RYMILLS: WILFRED GEORGE [Final], 9 Bentinck Street, W.1. G. T. Gardner, A. S. Snell and Rees Phillips.

STONE: REGINALD LESLIE [Birmingham School], 10 Park Hill, Moseley, Birmingham, 13. George Drysdale, T. M. Ashford and Herbert Jackson.

TAVENER: MISS BETTY MARY [The Polytechnic, Regent Street, London], 183 Church Road, Addlestone, Surrey. Joseph Addison, E. C. Scherrer and J. K. Hicks.

#### AS LICENTIATES (49)

ASHWORTH: ALLAN HARGREAVES, Borough Engineer's Dept., Town Hall, Accrington, Lancs; 149 Queen's Road West, Accrington. Saml. Taylor, Percy Thomas and Terence Carr.

BAILEY: SIDNEY GERALD, Town Hall, Bridgewater; St. Michael's, Shepton Beauchamp, Seavington, Somerset. Sir Edwin L. Lutyens, H. M. Fairweather and Robert W. Pite.

BAXTER: ALBERT ERNEST, 1 Walsall Street, Willenhall, Staffs; Lyndene, Dover Street, Bilston. L. Ewen Harper and applying for nomination by the Council under the provisions of Byelaw 3 (d).

BAYLEY: ARCHIE, c/o Messrs. Jeffries & Shipley, Bridge Street, Walsall; 27 Daisybank Crescent, Walsall, Staffs. Applying for nomination by the Council under the provisions of Byelaw 3 (d).

BROWN: ALBERT ERIC, County Architect's Dept., Shire Hall, Nottingham; 24 Grange Drive, Blaby, Leicestershire. E. W. Roberts, E. Frear and L. Stuart Stanley.

CHAPPELL: LIEUT. LAURENCE ALFRED HERBERT, R.E., c/o Messrs. Charrington & Co., Ltd., 86 Fenchurch Street, E.C.3; 32 Cromer Road, Hornchurch, Essex. Sidney C. Clark, and Col. S. H. Fisher applying for nomination by the Council under the provisions of Byelaw 3 (d).

CLAY: JOHN, County Architect's Department, Shire Hall, Nottingham; "Dalkeith," South Normanton Common, Derbyshire. E. W. Roberts, H. H. Goodall and E. Frear.

COUPE: ROBERT, Education Offices, Union Street West, Oldham; 7 Beresford Street, Oldham. Harold Bowman, Thomas J. Hill and Fred Thorpe.

CROCKETT: FRANCIS ROBERT DAVIS, The Flat, The Hough, Lichfield Road, Stafford. Applying for nomination by the Council under the provisions of Byelaw 3 (d).

DALE: BERNARD HENRY, Haddon Hall, Ogle Road, Southampton; 1 Old Mill Way, Shirley, Southampton. Applying for nomination by the Council under the provisions of Byelaw 3 (d).

DOBBIE: JAMES, Department of Agriculture for Scotland, St. Andrew's House, Edinburgh, 1; 14 Falcon Avenue, Edinburgh, 10. Applying for nomination by the Council under the provisions of Byelaw 3 (d).

DOUGLAS: SHOLTO, 50 Priory Road, Kenilworth. F. W. H. Lee, C. E. Bateman and Frederick G. Cundall.

DROMGOOLE: ERIC COLIN WULSTAN BUCHANAN, c/o Messrs. Heenan & Froude, Ltd., Worcester; 377 Ombersley Road, Worcester. Ingalt Sanders, Cyril F. Martin and Herbert Jackson.

- DYER: HERBERT, 13 Esplanade, Burnham-on-Sea, Somerset. Geo. P. Banyard and applying for nomination by the Council under the provisions of Byelaw 3 (d).
- EARP: EDWIN HARRY, 48 Henley Street, Stratford-on-Avon; Graycroft, No. 100 Shipston Road, Stratford-on-Avon. Guy Pemberton, Philip B. Chatwin and applying for nomination by the Council under the provisions of Byelaw 3 (d).
- FEARN: JOHN EDMUND, Air Ministry; 20 Broad Street, Launceston. Harold Tomlinson, Professor A. E. Richardson and Arthur F. C. Bentley.
- FORD: JOHN WRIGHT, City Architect's Department, Royal Exchange, Edinburgh; Dowiedene, Cramond, Barnton, Midlothian. J. R. McKay, T. F. MacLennan and John Wilson.
- GIBBS: HAROLD REUBEN, Directorate of Works, Air Ministry; Barden, 1 Chatsworth Road, Parkstone, Dorset. W. Tweedy, Jas. Allner and applying for nomination by the Council under the provisions of Byelaw 3 (d).
- GLEDHILL: JOHN NEWELL, c/o G. Noel Hill, Esq., City Architect, Town Hall, Manchester; 66 Victoria Road, Todmorden. G. Noel Hill, Leonard C. Howitt and Edgar Sutcliffe.
- HANCOCK: ALLAN, Ministry of Works and Planning, Westminster, S.W.1; 77 Barons Court, Church Lane, Kingsbury, N.W.9. Chas. J. Mole, H. T. B. Barnard and Wm. A. Ross.
- HASSAN: SAMUEL LEONARD, 3, Greyfriars, Leicester; 11 Severn Street, Leicester. Arthur H. Hind, George Arnold Cope and Arthur F. Bryan.
- HENLEY: HARRY WILLIAM, Ministry of Works and Planning, Bristol; "Berkeley," Station Road, West Town, near Bristol. Sir George H. Oatley, J. Ralph Edwards and Eustace H. Button.
- HODGE: DENIS CHAPMAN, c/o John F. Chapman, Architect's Office, Ringway, Cheshire; 95 Princes Gardens, W.3. T. P. Bennett, L. Rome Guthrie and W. Naseby Adams.
- HOLMAN: JOHN, L.C.C. Architect's Department, The County Hall, S.E.1; 5 Purberry Shot, Epsom Road, Ewell, Surrey. W. E. Brooks, B. H. Toms and Harold Greenwood.
- HUTCHINGS: STANLEY, County Architect's Department, County Buildings, Stafford; 48 Silkmere Crescent, Stafford. Bruce W. Oliver, C. M. Coombs and E. Bower Norris.
- HUTTON: SAMUEL, Lowlands, Skipton Road, Ilkley, Yorks. John Bennett and applying for nomination by the Council under the provisions of Byelaw 3 (d).
- JENKINS: ILTYD CHARLES, B.Sc., Town Hall, Farnborough, Hants; The Rowans, Waverley Road, Farnborough, Hants. Arthur J. Stedman, A. Leonard Roberts and G. Maxwell Aylwin.
- JOHNSON: SEYMOUR KELVIN, Deputy Engineer and Surveyor, Council Offices, Farnham, Surrey; "Barnoon," Alfred Road, Farnham. H. Lidbetter, Arthur J. Stedman and G. Maxwell Aylwin.
- JOLLIFFE: CYRIL ALFRED, 2a "Dovercourt," London Road, Portsmouth; 36 Kirby Road, North End, Portsmouth. V. G. Cogswell, R. A. Thomas and Norman Atkins.
- MESSITER: WILFRED BASIL, c/o Sir Alexander Gibb & Partners, Treforest Branch Office, Treforest Trading Estate, Pontypridd, Glamorgan; 38 Stallcourt Avenue, Roath, Cardiff. R. Palmer Baines, Percy Thomas and T. Harry Gibbs.
- MIDGLEY: HORACE BLACKBROUGH, Borough Surveyor's Department, Town Hall, Morecambe, Lancs; 23 Norwood Drive, Torrisholme, Morecambe. Charles B. Pearson, Arthur T. Nicholson and F. N. Pinder.
- MOSS: WILLIAM CYRIL, 67a New Street, Birmingham; 47 Holly Lane, Erdington, Birmingham, 24. R. Savage, Cyril F. Martin and Herbert Jackson.
- NEWTON: NORMAN, Works Liaison Office, Langley Hall, Langley, Bucks; c/o J. Taylor, Esq., "Lyndene," Chester Road, Middlewick, Cheshire. Peter Cummings, Benj. Waterhouse and Francis Jones.
- PARSONS: GILBERT, 12 Regent Street, Willenhall, Staffs. Applying for nomination by the Council under the provisions of Byelaw 3 (d).
- PEARSON: GEORGE VYNER, Ansell's Brewery, Ltd., Aston, Birmingham; 500 Lichfield Road, Four Oaks, Sutton Coldfield. Major George B. Cox, John B. Surman and H. Peter Hing.
- PYE: ALEXANDER, Architect and Master of Works, The National Bank of Scotland Ltd., 42, St. Andrew Square, Edinburgh, 2; 200 Overton Road, Kirkcaldy, Fife. J. R. McKay, T. F. MacLennan and John Wilson.
- ROBINSON: THOMAS GENTRY, Town Hall, Tyldesley, Lancs; 109 West View, Church Road, Northwich, Cheshire. Arthur Brocklehurst, Harold F. V. Newsome and J. Gordon McBeath.
- RODGERS: SPENCER CARLTON, P.A.S.I., c/o Messrs. Disturnal & Partners, 89 Mosley Street, Manchester; 44 Weymouth Road, Blackpool, Lancs. H. T. Seward, J. Price Nunn and Arthur W. Kenyon.
- ROSSER: JOSEPH, Cardiff; Brynteg, Pyle Cross, Pyle, Glamorgan. Major Sam Evans, L. R. Gower and Edwin Smith.
- SCOTT: LESTER RICHARD, Ministry of Works and Planning, S.W.1; "Blue Hayes," Leverstock Green, Herts. C. D. Hawley, Robert Cromie and George E. Tonge.
- SYKES: ARNOLD, c/o G. R. Oddy, Esq., Wards End Chambers, Halifax; Craig Side, 793 Manchester Road, Linthwaite, Huddersfield. C. Sunderland, B. R. Gribbon and W. Illingworth.
- THOMAS: LLEWELLYN JOHN, Municipal Buildings, Port Talbot; 1 Bridge Terrace, Port Talbot. Edwin Smith, L. R. Gower and Major Sam Evans.
- VICKERY: KENNETH PERCY, 5 Great College Street, Westminster, S.W.1; 90 Ryecroft Avenue, Whittton, near Twickenham, Middlesex. Terence Carr, Herbert Passmore and Anthony M. Chitty.
- VIPOND: JOSEPH, Borough Surveyor's Department, Town Hall, Talbot Road, Stretford, Lancs; 2 Kilburn Road, Edgeley, Stockport, Cheshire. J. P. Nunn, H. T. Seward and Professor R. A. Cordingley.
- WALLER: ROBERT ERIC, c/o County Architect, Shire Hall, Nottingham; 18 Stella Street, Mansfield, Notts. E. W. Roberts, Frank A. Broadhead and E. Frear.
- WARD: CHARLES EDWARD OWEN, Midland Bank Chambers, 1a Aldermans Hill, Palmers Green, N.13; 79 Prince George Avenue, Southgate, N.14. T. Harry Gibbs, H. Colbeck and J. T. W. Peat.
- WARD: THOMAS LEWIS, 114a Beaumont Road, Bournville, Birmingham. Applying for nomination by the Council under the provisions of Byelaw 3 (d).
- WELLS: STANLEY, H.M. Dockyard, Chatham; 11 Greentrees Avenue, Tonbridge. John W. Little, Cecil Burns and C. H. Strange.
- WILLIAMS: CYRIL BURNETT, "Dursley," North Street, Norton St. Philip, near Bath. J. Leighton Fouracre, A. S. Parker and B. Priestley Shires.

## Notices

### LICENTIATES AND THE FELLOWSHIP

By a resolution of the Council passed on 4 April 1938, on and after 1 January 1939 all candidates whose work is approved will be required to sit for the examination, which will be the design portion of the Special Final Examination, and no candidates will be exempted from the examination.

NOTE.—The above resolution will not affect Licentiates of over 60 years of age applying under Section IV, Clause 4 (c) (ii) of the Supplemental Charter of 1925.

### ASSOCIATES AND THE FELLOWSHIP

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the next available election they should send the necessary nomination forms to the Secretary R.I.B.A. as soon as possible.

### CESSATION OF MEMBERSHIP

Under the provisions of Byelaw 21 the following have ceased to be members of the R.I.B.A.:

#### As Fellows

Frederick Charles Cowderoy-Dale, Norman Aitken Dick, William Thomas Benjamin Foster, Evan Daniel Jones, Robert Leslie Rollo.

#### As Associates

Alexander Robert Fordyce Anderson, Ian Fyfe Cameron, Ralph Dickinson, Richard Alfred Fever, Herbert Emmanuel Gonsal, William Roderick John Mann, William Hugh Maton, Ralph Bertram Pearce, John Frederick Rees, John Bernard Shaw, Edmund Reay Somerville, Thomas Edward Senior Thwaite, Alwyne Tutton, Claude Cornelius Tom Warnes, Harry West.

#### As Licentiates

Francis Robert Aloysius Conway, Christopher Ronald Cooper, Alfred Charles Garwood, Harold Bernard Hardington, Reginald Llewellyn Llewellyn, George Henry Norman, Frederick Stanley Palling, James Leslie Pickering, Eric Prince, Harry John Worrow, Frank Harold Waple.

#### As Retired Licentiate

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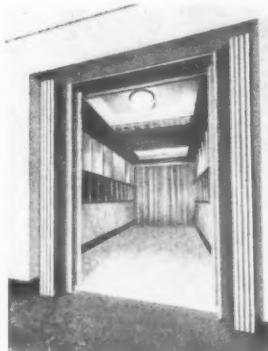
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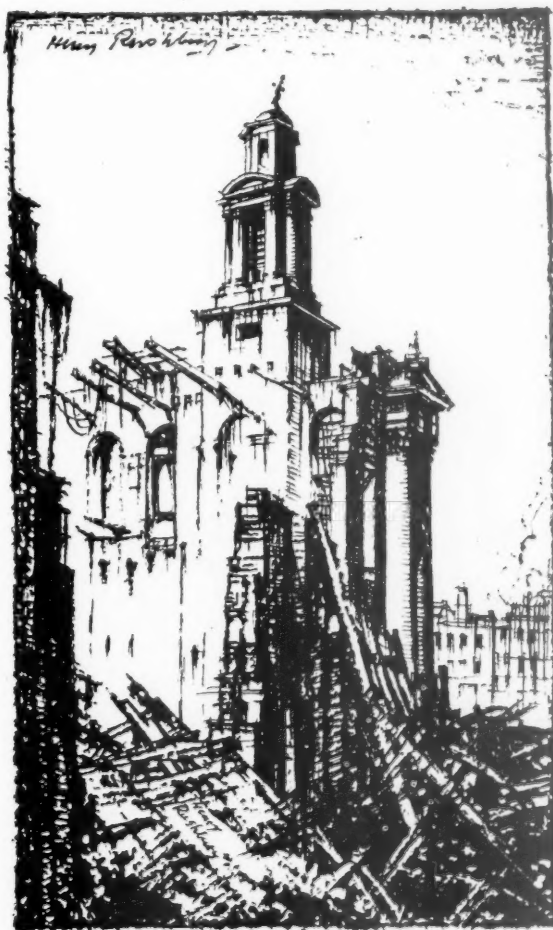
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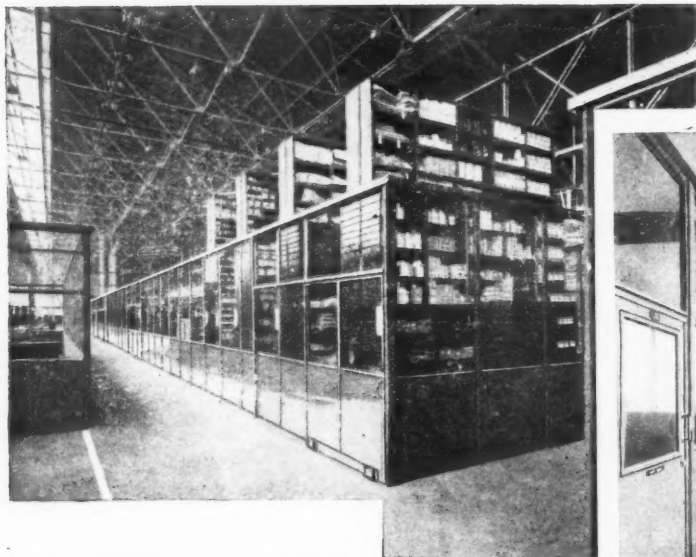


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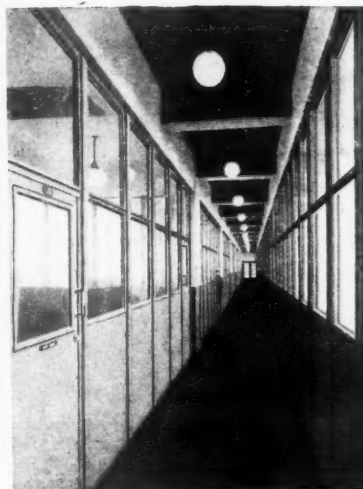
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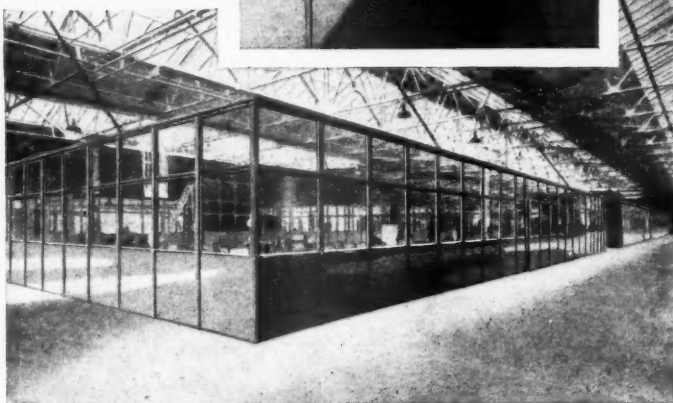
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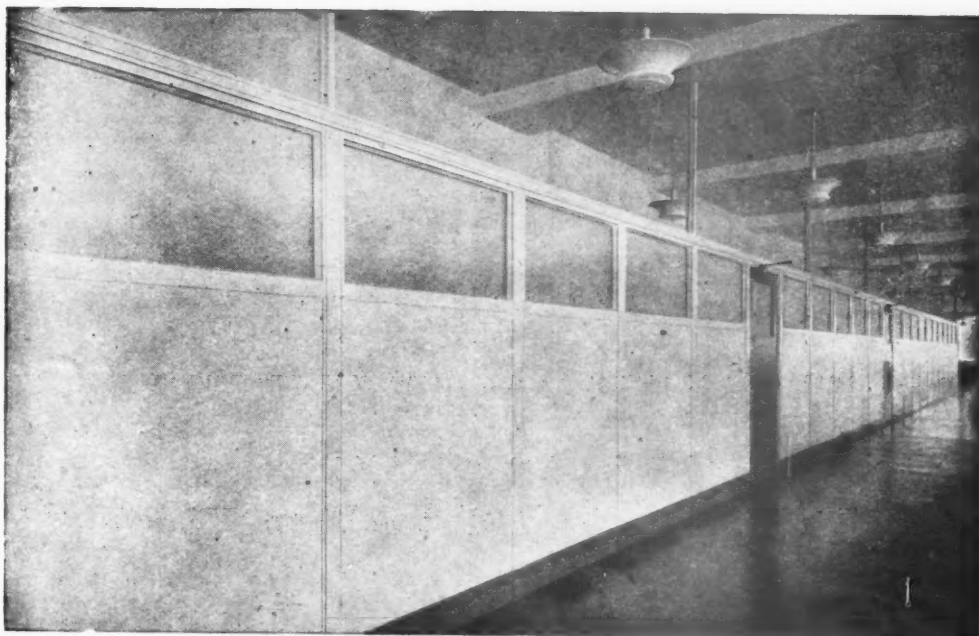
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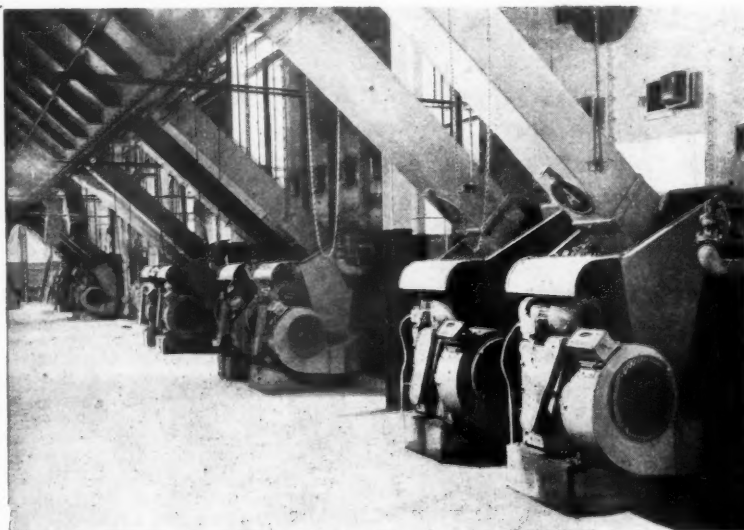
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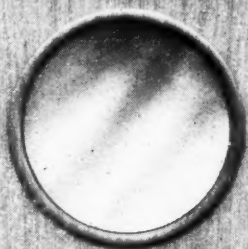
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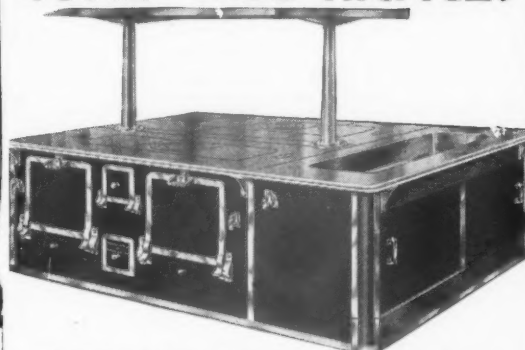
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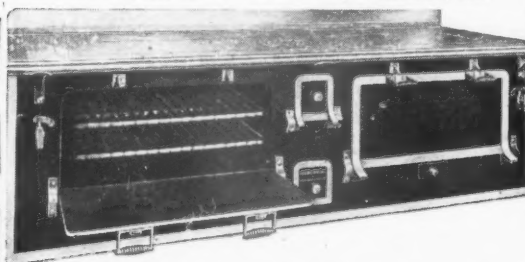


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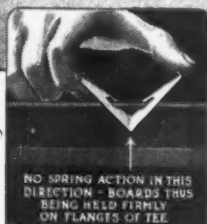
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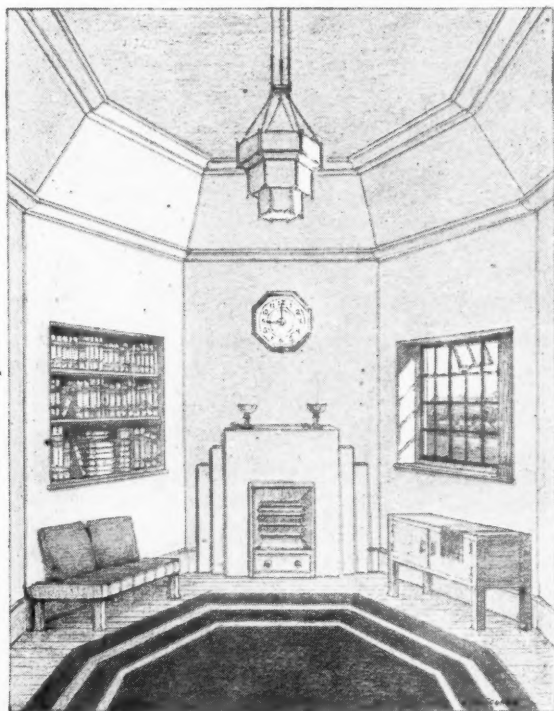
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SERIES No. 5

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## USES—No. 4 Wired Glass

**WIRED GLASS** is approximately  $\frac{1}{4}$ " thick reinforced with a wire mesh embedded in the middle of the glass, and is valuable as a safeguard against accident, burglary and fire.

### Translucent Types

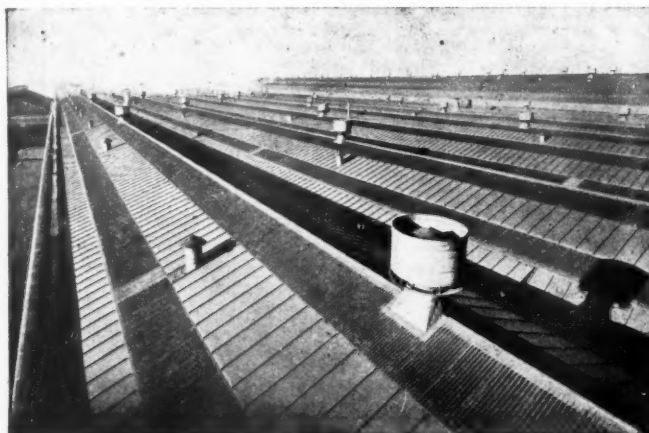
**GEORGIAN WIRED CAST** Reinforced with fine  $\frac{1}{8}$ " square mesh wire electrically welded at the intersections.

**WIRED CAST** Reinforced with a  $\frac{7}{8}$ " hexagonal mesh wire.

**WIRED ARCTIC** A Figured Rolled glass reinforced with a  $\frac{7}{8}$ " hexagonal mesh wire.

Georgian Wired Cast and Wired Cast are used for the glazing of roof lights and lantern lights, also for the vertical windows in warehouses, factories, workshops, etc. where maximum protection is needed against shocks and risk of spreading fire.

Wired Arctic has a patterned surface and affords a greater degree of privacy than the textured surfaces of Georgian Wired Cast and Wired Cast.



*A typical installation showing the extensive use of Wired Glass in a factory roof.*

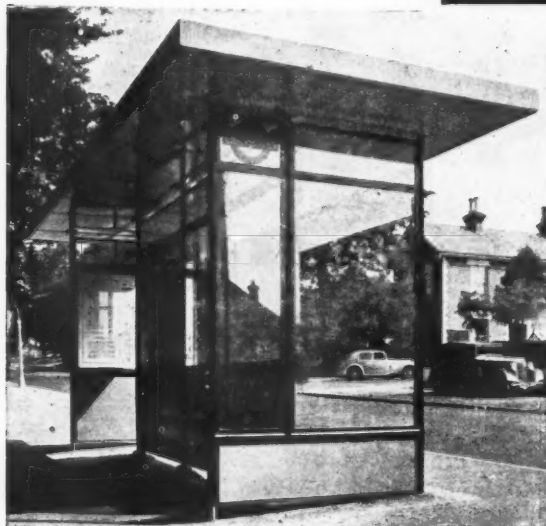
### Transparent Types

**POLISHED GEORGIAN WIRED** Reinforced with a fine  $\frac{1}{8}$ " square mesh wire electrically welded at the intersections.

**POLISHED WIRED** Reinforced with a  $\frac{7}{8}$ " hexagonal mesh wire.

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**Specification:** Decide which type of Wired Glass will be most suitable for your purpose, i.e., transparent or translucent glass reinforced with square or hexagonal wire mesh, and then specify by the recognised trade name.



*A shelter for London Transport showing the use of Georgian Polished Wired Glass.*

**FIRE-RESISTING GLAZING:** The types of Wired Glass described above have been approved as a fire-resisting material when glazed in panes not exceeding two feet either way and secured with fire-resisting materials.

*Note.*—Local regulations vary in different parts of the country.

**PATENT GLAZING:** Georgian Wired Cast and Wired Cast are largely used for roof and factory glazing in patent glazing bars, either vertical or sloping, and are supplied in sizes to suit the patent glazing contractors' requirements.

*This is published by Pilkington Brothers, Limited, of St. Helens, Lancashire, whose Technical Department is always available for consultation regarding the properties and uses of glass in architecture.*

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